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U. S. DEPARTMENT OF AGRICULTURE

EXPANDING OUTLETS for Agricultural Products

A Report of the National Marketing Service Workshop at Memphis, Tenn., November 5, 6, and 7, 1957

UNITED STATES DEPARTMENT OF AGRICULTURE
Agricultural Marketing Service in cooperation with
State Departments of Agriculture

Washington, D. C.
AMS 253

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July 1958

PROGRAM

1957 NATIONAL MARKETING SERVICE WORKSHOP

Theme: EXPANDING OUTLETS FOR AGRICULTURAL PRODUCTS

Time and Place: November 5, 6, and 7, 1957, Memphis, Tenn.

Purpose: To improve the effectiveness of marketing service programs conducted by State Departments of Agriculture in the field of promoting sales of farm products.

Program Plan:

The program consists of general sessions, to be attended by all persons, and work group sessions on special subjects, several of which will meet simultaneously. The general sessions deal with subjects of widespread interest, but consist largely of speeches because in a large group questions and answers are not practicable. The work group sessions deal with special subjects in fields in which the States have projects. They are so arranged that each person can participate in three of these sessions of his choice. The work group scheduling is as follows:

Day	Fruits and vegetables	Dairy Products, Livestock, Poultry and Eggs	Grain, Seed, Cotton, Tobacco	How to Work with Marketing Firms
Tuesday	Information Needed in a Program to Expand Outlets	Expanding Outlets Through Quality Improvement	Opportunities for Developing a Program to Expand Market Outlets	Firms Engaged in Assembly and Transportation
Wednesday	Expanding Outlets Through Quality Improvement	Techniques of Developing and Conducting a Program to Expand Outlets	Information Needed in a Program to Improve Marketing	Processors and Wholesalers
Thursday	Techniques of Developing and Conducting a Program to Expand Outlets	Information Needed in a Program to Expand Outlets	Increasing Returns Through Quality Improvement	Retailers

From this schedule it will be observed that a person interested only in marketing information can spend all three days in discussions of this subject for various commodities. Conversely, a person interested in only one commodity group can spend all three days in discussions of that commodity. On Tuesday evening there will be an opportunity for persons interested in other special subjects--such as home economists; transportation specialists; tobacco, cotton, and corn meal marketing specialists; and publicity people--to organize special work groups in their fields.

Each work group will summarize its recommendations and conclusions in a report to be presented during the afternoon of the third day as part of a combined report for the general topic. These reports and the speeches will be published in the proceedings, a copy of which will be sent to each person in attendance.

Tuesday, November 5

9:00 - 9:30 a.m. OPENING SESSION

Chairman - Hon. Si Corley, Commissioner, Mississippi Department of Agriculture and Commerce

Invocation - Hon. Si Corley, Commissioner, Mississippi Department of Agriculture and Commerce

Plans for the Workshop - William C. Crow, Liaison Officer, Matching Fund Program, State Departments of Agriculture, AMS, U. S. Department of Agriculture

9:30 - 10:15 a.m. GENERAL SESSION

Chairman - Matt Jennings, Director, Bureau of Markets, Tennessee Department of Agriculture

"Principles and Problems of Expanding Outlets for Agricultural Products" - Dr. Clifton B. Cox, Purdue University, Indiana

10:30 a.m.-12:15 p.m. MEETINGS OF FIRST WORK GROUPS

Group A - Fruits and Vegetables

Topic: MARKETING INFORMATION NEEDED IN A PROGRAM TO EXPAND OUTLETS

Chairman - Boyce Dyer, Georgia Department of Agriculture
Secretary- Woodrow Clevinger, Washington Department of Agriculture

Speakers:

"How We Use Marketing Information in Planning Promotion Programs"--George H. Chick, Maine Department of Agriculture

"Types and Sources of Marketing Information Needed for Expanding Outlets for Fruits and Vegetables"--George H. Goldsborough, AMS, USDA

This group will consider the kinds of information needed for developing and operating a program of expanding market outlets, the extent to which the needed information is available, sources of such information, and the specific use of each kind of information, and will reach conclusions with respect to the additional kinds of marketing information needed and how to go about obtaining it. Consideration will be given to the differences in the kinds of information needed to assist in the movement of seasonal surpluses and that needed for a long-time program of increasing sales. The types of information and procedures for obtaining needed information to be discussed include, but are not restricted to, production estimates for local and competing areas; harvest period and time of peak movement; quality characteristics of the product; market prices and supplies in local and competing areas; consumer and trade preferences for varieties, grades and sizes of the product; package types and sizes; how to determine the form in which consumers and the trade prefer their products; estimates of per capita consumption by areas; how to determine the type of outlets and places offering the greatest promise of increased sales; and how to measure statistically the results of a sales promotion program.

Group B - Dairy Products, Livestock, Poultry and Eggs

Topic: HOW OUTLETS CAN BE EXPANDED THROUGH QUALITY IMPROVEMENT WORK

Chairman - Justin Doak, Missouri Department of Agriculture
Secretary - Floyd Fenton, Dairy Division, AMS, USDA

Speakers:

"Effectiveness of the Kansas Egg Quality Improvement Program in Promoting Kansas Eggs" - Winzer J. Petr, Kansas State Board of Agriculture

"Importance of Quality in Increasing Sales of Dairy Products" - Brace Rowley, Kansas State Board of Agriculture

In this work group session consideration will be given to examples of how the maintenance of quality of these products as they pass through the marketing channel has increased sales; the extent to which sales can be increased through quality improvement work; the various approaches to a quality improvement program including such devices as State labels of quality, regulations of minimum quality through State laws, and voluntary grading programs, the places in the marketing channel where quality maintenance work should be done; the specific kinds of quality work most needed on each of these products; the kind of personnel needed to conduct quality improvement programs; and ways to measure results.

Group C - Grain, Seed, Cotton, and Tobacco

Topic: OPPORTUNITIES FOR DEVELOPING A PROGRAM TO EXPAND MARKET OUTLETS

Chairman - John Winfield, North Carolina Department of Agriculture
Secretary - John L. Crothers, Maryland State Board of Agriculture

Speakers:

"Expanding Markets Abroad through Cooperative Efforts of USDA and Industry" - Richard H. Roberts, Foreign Agricultural Service, USDA

"Opportunities for Developing Outlets for Grain"- W. Dayton Maclay, Agricultural Research Service, USDA, Peoria, Ill.

"Utilization Research as a Means of Expanding the Use of Cotton" - Mason J. DuPré, Jr., Agricultural Research Service, USDA, New Orleans, La.

Several State departments of agriculture are interested in learning about the cooperative programs of USDA and industry organizations in promoting United States agricultural products in foreign markets. A speaker from the Foreign Agricultural Service, USDA, will discuss these programs. The group will then discuss what functions State departments of agriculture can perform in connection with programs of this type. A speaker from the Agricultural Research Service, USDA, will describe the progress being made in developing new uses and new markets for grain and cotton. Consideration also will be given to the potentialities for expanding domestic markets for these commodities. The group will then reach conclusions regarding the opportunities, if any, which State departments of agriculture have to carry out successful promotional activities for the commodities or their products in domestic markets.

Group D - How to Work with Marketing Firms

Topic: FIRMS ENGAGED IN ASSEMBLY AND TRANSPORTATION

Chairman-John Stiles, West Virginia Department of Agriculture
Secretary-S. T. Warrington, AMS, USDA

Speakers:

"How We Are Working With Firms Engaged in the Assembly of Agricultural Products"-Howard Brosset, Louisiana Department of Agriculture and Immigration

"How State Department of Agriculture People Can Work With Transportation Agencies-John C. Winter, AMS, USDA

This group will concentrate its attention on how to work more effectively with marketing agencies engaged in the assembly and transportation of products. The types of agencies included are livestock auctions, country elevators, creameries and other milk plants, egg assembly plants, fruit packing and storage plants, cotton gins, railroad and trucking companies. The types of things that marketing service people should do with and for such firms will be listed rather early in the discussion. Then the best approaches to selecting the problems to receive attention and to making contact with the agencies will be determined. The qualifications required of personnel to do such work will be agreed upon. Case studies of work of this kind will be discussed briefly to show what was done, how it was done, and the results accomplished. Finally the group will consider what steps a State department of agriculture should take in developing a working relationship with these firms and agencies and in providing them with the quality of service and guidance needed under present conditions of rapid change in technology and marketing methods and structure

12:15 - 1:30 p. m. LUNCH

1:30 - 2:15 p. m. GENERAL SESSION

Chairman - Hon. Ben J. Butler, Commissioner, Kentucky Department of Agriculture

"Recent Research Results That Can Be Used In Marketing Service Programs" - Dr. Harry C. Trelogan, Director, Marketing Research Division, AMS, USDA, and President of the American Farm Economic Association

2:15 - 5 p. m. MEETINGS OF FIRST WORK GROUPS

(Continuation and completion of meetings of the work groups formed at the morning session, and agreeing upon recommendations to be presented to the Workshop.)

7:30 - 10:00 p.m. MEETINGS OF SPECIAL WORK GROUPS

This period has been set aside for ad hoc sessions and informal discussions of small groups whose special interest is in such fields as marketing information and publicity, home economics, improvements in transportation, development of cotton fiber testing programs and assistance to gin operators in increasing the efficiency of ginning, service to corn millers in improving product quality, and improvement in tobacco marketing practices. Announcement will be made at the opening session of the place where those with these special interests should meet for the purpose of organizing into appropriate groups and planning their activities during the following two days of the Workshop.

Wednesday, November 6

8:30 - 9:15 a.m. GENERAL SESSION

Chairman - Hon. Phillip Alampi, Secretary, New Jersey Department of Agriculture

"The Changing Scene in Marketing and What Producers and Marketing Agencies Must Do To Meet It - A. C. Hoffman, Vice President, Kraft Foods Company, Chicago, Ill.

9:30 - 12:00 Noon MEETINGS OF SECOND WORK GROUPS

Group A - Fruits and Vegetables

Topic: HOW OUTLETS CAN BE EXPANDED THROUGH QUALITY IMPROVEMENT WORK

Chairman - C. Harold Bray, Kentucky Department of Agriculture
Secretary - R. P. Callaway, AMS, USDA

Speakers:

"Effective Approaches to the Problem of Improving Quality and Securing Uniformity in Packing Fruits and Vegetables" - W. J. Kuhrt, California Department of Agriculture

"Improvements Needed in the Quality, Packaging, and Handling of Fruits and Vegetables from the Viewpoint of the Retailer" -Dr. R. A. Kelly, University of Illinois

In this work group session consideration will be given to examples of how the maintenance of quality of these products as they pass through the marketing channel has increased sales; the extent to which sales can be increased through quality improvement work; the various approaches to a quality improvement program, including such devices as State labels of quality, regulation of minimum quality through State laws, voluntary grading programs, and marketing agreements and orders; the places in the marketing channel where quality maintenance work should be done; the specific kinds of quality work most needed on each of these products; the kind of personnel needed to conduct quality improvement programs; and the ways to measure the results of quality improvement programs.

Group B - Dairy Products, Livestock, Poultry and Eggs

Topic: TECHNIQUES OF DEVELOPING AND CONDUCTING A PROGRAM FOR EXPANDING MARKET OUTLETS

Chairman - John L. Rainey, Pennsylvania Department of Agriculture
Secretary - James R. Harris, Illinois Department of Agriculture

Speakers:

"How the American Dairy Association Can Assist State Departments of Agriculture in Promoting Dairy Products" - Shelby Robert, Jr., American Dairy Association, Chicago, Ill.

"Procedures Followed in Promoting Maine Broilers" - William Charron, Maine Department of Agriculture

This group will discuss various ways of developing and conducting promotional programs, including how to decide what to promote and when to promote it; what information is needed to reach such decisions; selecting the groups and organizations that should participate in the program; the kinds of activities that should be carried on by State department of agriculture employees and those that should be performed by industry; how such work should be financed; the relative merits of various types of presentations such as paid advertising, sponsored radio and television programs, free publicity media, point-of-sale material, demonstrations, samples, and meetings; organizing and enlisting the support of wholesalers and retailers; and how to determine the most effective techniques for a particular situation.

Toward the end of the discussion period the group will attempt to reach conclusions as to the best way to develop and conduct a program for expanding outlets.

Group C - Grain, Seed, Cotton, and Tobacco

Topic: MARKETING INFORMATION NEEDED IN A PROGRAM TO IMPROVE MARKETING

Chairman - Davis Foreman, Illinois Department of Agriculture
Secretary - O. W. Faison, North Carolina Department of Agriculture

Speakers:

"Information Needed to Improve Grain Marketing" - Robert E. Post, AMS, USDA

"Adequacy of Cotton Statistics for Efficient Marketing"- Fred P. Johnson, North Carolina Department of Agriculture

"Adequacy of Tobacco Statistics for Efficient Marketing" - J. H. Cyrus, North Carolina Department of Agriculture

This group will consider the kinds of statistical and other types of information needed for more efficient marketing of these commodities, the extent to which the needed information is available, the sources of such information, and specifically what each kind of information is used for, and will reach conclusions with respect to the additional kinds of marketing information needed and how to go about obtaining it. The types of information to be discussed include, but are not restricted to, production estimates for local and competing areas; market prices and supplies in local and competing areas; outlook information; how to tell when to store and when to sell; and data on storage and handling facilities.

Group D - How to Work with Marketing Firms

Topic: PROCESSORS AND WHOLESALERS

Chairman - O. H. Engendorff, Wyoming Department of Agriculture

Secretary - John Hamann, AMS, USDA

Speakers:

"How to Work with Processors in Improving their Operations" - R. B. Kelley, North Carolina Department of Agriculture

"Techniques to be Used in Securing Cooperation of Wholesalers in Marketing Service Programs"- Spencer G. Duncan, New York Department of Agriculture and Markets

This group will begin its discussion by listing the kinds of work State departments of agriculture are doing with processors and wholesalers. Then attention will shift to a listing and discussion of the kinds of marketing problems that face processors and wholesalers, and what marketing service people can do do help solve them. In this discussion consideration will be given to how to get the understanding and cooperation of the firms, what kind of people are needed to do this type of work, the importance of following through and doing a good job with one firm rather than flitting from place to place, how to get research findings that can be applied to the problems at hand, technical assistance available to marketing service people from other agencies, how to present the recommendations to the processor or wholesaler, following up on the action to measure the results and see if anything else is needed, and the importance of trade meetings or clinics. The types of agencies included in this topic are canning plants, livestock slaughtering plants, poultry processing plants, cotton mills, dairy manufacturing plants, grocery wholesalers, and specialized food wholesalers such as those handling fruits and vegetables, frozen food, meats, poultry and eggs, and dairy products.

12:00 - 1:30 p.m. LUNCH

1:30 - 2:30 p.m. GENERAL SESSION

Chairman - Dr. James R. Hay, Commissioner, Ohio Department of Agriculture

"What a State Department of Agriculture Should be Doing to Meet the Challenge of Our Fast Changing Marketing System"- Hon. L. Y. Ballentine, Commissioner, North Carolina Department of Agriculture

2:45 - 5:00 p.m. MEETINGS OF SECOND WORK GROUPS

(Continuation, completion, and drafting of recommendations of the Second Work Groups formed at the morning session.)

6:30 p. m. BANQUET

Toastmaster - Hon. L. Y. Ballentine, Commissioner, North Carolina Department of Agriculture

Entertainment

"A Gateway to the Expansion of Agriculture - Hon. E. Buford Ellington, Commissioner, Tennessee Department of Agriculture

Thursday, November 7

7:30 - 9:15 a.m. GENERAL SESSION

Chairman - Hon. Math Dahl, Commissioner, North Dakota Department of Agriculture and Labor

"Promoting Marketing Efficiency"- Dr. Herman M. Southworth Pennsylvania State University

9:30 a.m. - 12:30 p.m. MEETINGS OF THIRD WORK GROUPS

Group A - Fruits and Vegetables

Topic: TECHNIQUES OF DEVELOPING AND CONDUCTING A PROGRAM FOR EXPANDING MARKET OUTLETS

Chairman - Hugh Martin, North Carolina Department of Agriculture
Secretary - Norman Healy, AMS, USDA

Speakers:

"Guideposts to Follow in Organizing Promotional Programs for Food Products" - G. Chester Freeman, AMS, USDA

"Effectiveness of a Farmer-Retailer Committee in Organizing Promotional Programs"- Dr. Raymond B. Wilson, Purdue University, Indiana

This group will discuss various ways of developing and conducting promotional programs, including how to decide what to promote and when to promote it; what information is needed to reach such decisions; selecting the groups and organizations that should participate in the program; setting up an organization to carry out such a program; the kinds of activities that should be carried on by State department of agriculture employees and those that should be performed by industry; how such work should be financed; and the relative merits of various types of presentations such as paid advertising, sponsored radio and television programs, free publicity media, point-of-sale material, demonstrations, samples, and meetings; organizing and enlisting the support of wholesalers and retailers; and how to determine the most effective techniques for a particular situation. Toward the end of the discussion period the group will attempt to reach conclusions as to the best way to develop and conduct a program for expanding outlets.

Group B - Dairy Products, Livestock, Poultry and Eggs

Topic: MARKETING INFORMATION NEEDED IN A PROGRAM TO EXPAND OUTLETS

Chairman - John Matheson, New York Department of Agriculture and Markets
Secretary - Walt Mason, New York Department of Agriculture and Markets

Speakers:

"Marketing Information Needs of the Poultry Industry" - R. F. Frazier, National Broiler Council, Richmond, Va.

"Types and Sources of Marketing Information Needed for Expanding Outlets for Dairy Products" - George H. Goldsborough, AMS, USDA

This group will consider the kinds of statistical and other types of information needed for developing and operating a program of expanding market outlets, the extent to which the needed information is available, the sources of such information, and specifically what each kind of information is used for; and will reach conclusions with respect to the additional kinds of marketing information needed and how to go about obtaining it. Consideration will be given to the differences in the kinds of information needed to assist in the movement of temporary surpluses and that needed for a longtime promotion of increased sales. The types of information to be discussed include, but are not restricted to, production estimates for local and competing areas; market prices and supplies in local and competing areas; outlook information; consumer and trade preferences for products and package types; how to determine the form in which consumers and the trade prefer their products and which form offers greatest promise for market expansion; estimates of per capita consumption of various products by areas to ascertain where consumption is low; how to determine the type of outlets and places offering the greatest promise of increased sales; and how to measure statistically the results of a sales promotion program.

Group C - Grain, Seed, Cotton, and Tobacco

Topic: HOW RETURNS CAN BE INCREASED THROUGH QUALITY IMPROVEMENT WORK

Chairman - John Mahoney, Maryland State Board of Agriculture
Secretary - E. C. Collins, AMS, USDA

Speakers:

"Increasing Returns to Farmers in West Virginia through Quality Improvement" - Charles E. Campbell, West Virginia Department of Agriculture

"Procedures Used to Preserve and Improve Grain Quality in Virginia" - W. L. James, Virginia Department of Agriculture and Immigration

In this work group session consideration will be given to examples of how the maintenance of quality of these products as they pass through the marketing channel has increased returns to growers; the extent to which sales can be increased through quality improvement work; the various approaches to a quality improvement program, including such devices as developing and applying new measures of quality, regulation of minimum quality through State laws, voluntary grading program, and special quality improvement programs; the places in the marketing channel where quality maintenance work should be done; the specific kinds of quality work most needed on each of these products; the kind of personnel needed to conduct quality improvement programs; and ways to measure results.

Group D - How to Work with Marketing Firms

Topic: RETAILERS

Chairman - George H. Chick, Maine Department of Agriculture
Secretary - Jack F. Hartzell, Michigan Department of Agriculture

Speaker:

"An Effective Program for Working with Retailers" - Dr. Raymond W. Hoecker, AMS, USDA

This session will be a presentation of a portion of a clinic for operators of retail food stores to show them how to improve the efficiency of their operations. Such clinics have been held by trade groups and others in various parts of the country and there is widespread demand for more of them. Due to the shortage of time for this discussion, the operation of the produce department of a retail store will be used as an example. The presentation will show specific examples of how to improve the handling of produce and the ways of getting such improvements adopted by the produce department managers. The examples used will be taken from clinics which Dr. Hoecker and his associates have helped conduct with groups of retailers and wholesalers who train retailers in various parts of the country. This work group session was planned at the request of certain States that are interested in developing a program in retailing. While Dr. Hoecker cannot help each State conduct retail clinics, if enough States desire to place specialists in this field on their staffs, a special 3-day workshop on this subject might be arranged for training these State employees. This work group is designed to give the States that might possibly be interested an idea of the work that might be done in this field. Toward the close of the session the group will develop recommendations on this subject.

12:30 - 1:30 p.m. LUNCH

1:30 - 2:30 p.m. MEETINGS OF THIRD WORK GROUP

(Continuation, completion, and development of recommendations of Third Work Groups formed at the morning session.)

2:30 - 5:00 p.m. GENERAL SESSION

Chairman - Hon. Byron G. Allen, Commissioner, Minnesota Department of Agriculture

"The Advisory Committee Speaks"

Hon. L. Y. Ballentine, Commissioner, North Carolina Department of Agriculture (Chairman)

Hon. Roy Freeland, Secretary, Kansas State Board of Agriculture

Hon. Stillman J. Stanard, Director, Illinois Department of Agriculture

Hon. C. J. Carey, Deputy Director, California Department of Agriculture

Hon. George H. Chick, Deputy Commissioner, Maine Department of Agriculture

The above persons constitute the committee that guides the development and operation of the matching-fund marketing service program in the States. These men will give their frank opinions on such topics as how to develop a good program in a State, the importance of State agencies working together in solving marketing problems, how to organize the marketing work in a State department of agriculture, raising funds for marketing service work, lines of work that should be emphasized, an appraisal of what has been accomplished,and advice for future work. Of special interest will be the discussion by this group concerning the need to develop a more effective publicity program relating to matched-fund work and its accomplishments and how such a program should be organized in the States.

PRESENTATION OF WORK GROUP REPORTS

"Marketing Information Needed in a Program to Expand Outlets"

"How Outlets Can Be Expanded through Quality Improvement Work"

"Techniques of Developing and Conducting a Program for Expanding Market Outlets"

"How To Work with Marketing Firms and Agencies"

"Special Work Groups"

The secretaries of the work groups for each topic will prepare a combined report covering the respective topics. This report, about 12 minutes in length, will be presented by one of the work group secretaries.

Concluding remarks: Leighton G. Foster, Chief Marketing Specialist, Liaison, Matching Fund Program, State Departments of Agriculture, AMS, USDA

ADJOURNMENT

EXPANDING OUTLETS FOR AGRICULTURAL PRODUCTS

A Report of the National Marketing Service Workshop
at Memphis, Tenn., November 5, 6, and 7, 1957

PLANS FOR THE WORKSHOP

William C. Crow, Liaison Officer, Matching Fund
Program, State Departments of Agriculture
United States Department of Agriculture

The Fifth National Marketing Service Workshop is being held by instruction of the Advisory Committee on Cooperative Work with State Departments of Agriculture, consisting of the Hon. L. Y. Ballentine, Commissioner, North Carolina Department of Agriculture, Chairman; the Hon. Roy Freeland, Secretary, Kansas Board of Agriculture; the Hon. Stillman J. Stanard, Director, Illinois Department of Agriculture; the Hon. C. J. Carey, Deputy Director, California Department of Agriculture; and the Hon. George H. Chick, Deputy Commissioner, Maine Department of Agriculture. The program was developed by a committee consisting of George H. Chick, Maine; Clifton B. Cox, Indiana; Marvin A. Faller, Louisiana; and John A. Winfield, North Carolina, assisted by members of the staff of the Liaison Office, Matching Fund Program, of the Agricultural Marketing Service. The only reason this workshop is being held is to help you people who are carrying on the marketing work in the States to do a better job.

The theme of this meeting is "Expanding Outlets for Agricultural Products." As you well know this is currently a major problem of agriculture. Many commodities are in chronic or temporary surplus, and most of the States are wrestling with problems of finding outlets for them. About 30 percent of the funds expended in the matching fund marketing service program are currently being used in these activities. Hence, our job is to get maximum results from this expenditure, and to help both producers and consumers by getting these surplus products to the people who can use them.

To get the most out of this workshop, each person must keep several points in mind. First, every person here must be a teacher, pointing out successful methods he has used and likewise those that have not worked out well. Each person should contribute his best thinking to the discussions. Second, stay in each session from beginning to end. Late comers and early leavers contribute little except confusion to a discussion group. Third, make it your business to see that your group reaches definite conclusions on (a) what activities are worth doing, (b) what activities are useless, (c) the best ways of getting the job done, and (d) how to measure the results of any program. Fourth, help your work group prepare a good report, force it to reach conclusions, and see that it records the "meat" of the discussion for the "proceedings" which will be a record of this meeting, available to all people engaged in this work.

A fifth thing you can do that will be of real assistance to you is to take this opportunity to get acquainted with people from other States and from Washington who can help you on your problems. Finally, in cases where several people are here from a State, greater benefit will be received from the workshop if one person will attend each work group instead of all going to the same one.

To start each half day, we have a general session. At these sessions talks will be given by eminent authorities in their fields on subjects of general interest. These talks are intended to give broader vision to people engaged in this program, to add enthusiasm to their undertakings, and to provide specific information which can be used in your work groups. The first speaker is Dr. Clifton B. Cox, of Purdue University, who will speak on "Principles and Problems of Expanding Outlets for Agricultural Products." This afternoon Dr. Harry C. Trelogan, director of the Marketing Research Division of the AMS and president of the American Farm Economic Association, will discuss "Recent Research Results That Can Be Used in Marketing Service Programs." Tomorrow morning, Dr. A. C. Hoffman, vice president, Kraft Foods Company, will talk on "The Changing Scene in Marketing and What Producers and Marketing Agencies Must Do To Meet It."

Wednesday afternoon, the chairman of our Advisory Committee, the Hon. L. Y. Ballentine, Commissioner of Agriculture of the State of North Carolina, will give us his views of "What a State Department of Agriculture Should Be Doing To Meet the Challenge of Our Fast Changing Marketing System." Our banquet speaker will be the Hon. E. Buford Ellington, Commissioner of Agriculture of Tennessee, whose subject will be "A Gateway to the Expansion of Agriculture." On Thursday morning, Dr. Herman M. Southworth, of Pennsylvania State University, will bring us a message on "Promoting Marketing Efficiency." At the closing session on Thursday afternoon, our Advisory Committee will give us some advice on how to get the most out of this marketing service program.

The second major part of this program consists of the sessions of the work groups. After each general session, the persons in attendance will divide into 4 work groups. One of these will discuss the problems as applied to fruits and vegetables; the second, dairy products, livestock, poultry, and eggs; the third, grain, seed, cotton, and tobacco; and the fourth, "How to Work with Marketing Firms." On one day each of these commodity groups will discuss "Expanding Outlets through Quality Improvement;" on another day, "Information Needed in a Program To Expand Outlets;" and on the third, "Techniques of Developing and Conducting a Program To Expand Outlets." The work group topics have been so arranged that a person having chiefly a commodity interest can attend a work group session on that commodity each day, while a person interested in a topic such as product quality, can attend a work group on that topic all three days.

The work group on retailing, scheduled for Thursday, is to be a type of clinic on the subject, and is being conducted to show interested persons how work can be done with retailers. Your attention is called also to a meeting from 7:30 to 10 this evening at which special work groups will be formed to discuss any other subjects on which there is enough interest to have a group.

Each work group has a chairman and a secretary. Two speakers have been provided to open each work group session. Their talks will give background material for the subjects to be discussed. Each work group is asked to prepare a report which will set forth its findings, and conclusions. These reports will be summarized at the closing session on Thursday afternoon and published in the "proceedings."

In the program, a copy of which you have, you will find a description of the subject matter to be covered by each work group. If you have not already done so, read this material and select the work group you would like to attend on each of the three days. Do not change work groups during any day. Choose the one you want to attend, and stay with it until the day is over. Persons shifting from one group to another during a day merely interfere with the progress of the group.

Banquet tickets for Wednesday night should be purchased today at the registration desk in order that the hotel will know how many persons are to be served. Persons who have not registered should do so, if they wish to receive a copy of the "proceedings." When you register, you will receive a name tag. You are requested to wear it so that we may all become acquainted. With the full participation of all of you in the program which has been arranged, this workshop should be a real help to you in the efforts you are making to serve the people of your State.

PRINCIPLES AND PROBLEMS OF EXPANDING OUTLETS FOR AGRICULTURAL PRODUCTS

Clifton B. Cox
Purdue University

In our country today and in the world, expanding markets is not an easy task. This is particularly true if we plan to sell the products competitively and not give them away. The only ways I know that we can expand markets are to sell more to present users and/or sell to new customers. Although the alternatives look small, when we think of only two, they are very broad. This gives us a potential market of everyone. We may increase the sales to any person already using, or we may look to those people who are not currently using the product.

If we are going to attempt to expand our market either to more customers or to increase purchases by present customers, there are certain fundamental things that must be considered.

I. We must have a product consumers want. Here I would like to pause and say that some of our most difficult marketing problems are caused by either production of the wrong product or wrong qualities of the product. We still have a long way to go in production. Those who say that we have solved all the production problems and therefore need to re-orient our research haven't tried to sell some of the currently produced products. We need an expanded marketing program, but we also need to continue our efforts in making our production come nearer to consumers' wants.

II. Wherever possible, the product should be improved in the marketing channel. This in general is called quality control, but many times includes substantial changes in the products. For example, we may process the lower quality or grades of meat in the more desirable products -- such as weiners or some of the luncheon meats. We may make certain other products more attractive to the consumers; for example, packaged apples, prepackaged meats. Or we may slightly change the method of merchandising the products so that they reach the consumer in better condition -- frozen vegetables, frozen fish, and certain frozen meat products. In fact, processors and retailers have gone a long way toward making agricultural products more attractive for consumers. They have also gone a long way toward cutting down chore work for the housewife. Think of the quick-frozen foods that are available today. Recently I was in a store that had frozen hamburgers. I expect next we'll find them: One with onions, one without.

III. Wherever possible, changes should be made in the product for new uses. Considerable emphasis has been placed recently on utilization research. There is a bill now before Congress to increase research in this area. Perhaps one of the outstanding examples of an agricultural product that lends itself to utilization work and development is soybeans.

IV. We must advertise or promote. Advertising and promotion in some circles are frowned upon, and are thought to be wasteful by some economists. However, others swear by them and think that anything can be sold through proper promotion programs. Advertising or promotion is really an effort to increase the demand for the product. We should remember that advertising or promotion is not a cure-all for all products. Some products respond much more to promotion than others. There is still a lot that we do not know about advertising. Whenever basic information is given to consumers as a basis for decisions, it seems to me that this is helpful. One assumption in our competitive economy is that we have perfect information. This is not true, but the nearer we can accomplish perfect knowledge, the better our consumers will be in making the correct decisions.

Advertising results are very difficult to evaluate. Usually large sums of money are involved; extravagant claims are made; some of them may be true, but caution should be used about jumping blindly into a large promotional scheme for a product. There are usually too many variables about the product to give all the credit to advertising. Sometimes we have a substantial change in product in packaging. Sometimes we have governmental programs to supplement advertising programs. Sometimes we have industry support. Many of these things may cause increased sales. I do not give advertising a complete blanket approval nor do I give it severe condemnation. I say that we must look at the product, the conditions, the cost, the possible returns, but in every case, be certain that funds are used wisely and according to the wishes of those who are contributing the funds.

V. Price competitively. This is an old-fashioned thought. In fact, I hold many old-fashioned ideas, such as that people can spend money only once. I am not certain this is generally recognized. I am certain that it is not recognized by some women, especially my wife. Recently she went to town and purchased a dress (of course, she said she had none to wear). When she returned, I asked her how much she had spent. She said, "Nothing, I charged it."

Price is still an effective method of increasing sales provided we have a standardized or well known product. We hear statements today also that price is the only method of expanding markets -- that our prices are too high. I am not certain, in the short run at least, that consumption would be materially increased by lowering prices on some of our commodities.

SUPPLY AND DEMAND ARE STILL IN OPERATION. Although many people say they would like to see supply and demand return to our marketing system, I say that they are there and will always be, as long as we have our type of marketing system in operation. The difference is that now we are able to do something about supply and about demand. Here are a few things that we might do about supply:

1. Before production, we can limit acreages as we have done. The automobile and other industries have followed this process for years. We are learning it. It has taken us a long time, but I think we can effectively do it.

2. After production, we can affect the supply by our grading programs. Any economist knows that if he can effectively divide the market, more total money can be taken from that market. Again, industry has followed this practice for many years. Look at your series of automobiles: Each producer pricing as nearly as possible a car (with gadgets) to fit practically every income and ego. In this manner, people spend more for automobiles than they would if they had one choice that would provide adequate transportation. Sometimes in our agricultural field we try to force all buyers to buy one quality, or products that are not graded according to quality. We are learning a few things here. We are currently blending milk -- pricing according to end use. There may be still many more possibilities of affecting the supply curve through pricing according to end use.

3. We can also affect the supply after production through storage and destruction. Yes, I said destruction. We can store when supplies are abundant, which takes them off the market at that time but may not completely eliminate their effect; it may put them back on at a later date when supplies are smaller.

We can destroy. This, as yet, has not gained wide acceptance, but in some States it is fairly effective.

We now too are able to do something about demand. This in general has come through educational or promotional programs. The nutritionists have added greatly to the knowledge of consumers and have shifted the demand for certain products -- some up, and some down. Promotional programs may appeal to health through nutrition, to loyalty, or may appeal to the ego of people. Everybody is doing it.

THERE ARE MAJOR PROBLEMS IN EXPANDING OUTLETS FOR AGRICULTURAL PRODUCTS:

1. The demand for most agricultural products is INELASTIC. We economists explain this by saying that people will eat more only if prices are lowered much more than the quantity taken. Or the more you sell, the less money you get for it. This seems rather strange, but look at some of the records. Farmers received more money for the smaller number of hogs sold last year than for the large number of hogs sold in the years before. This is true with practically all agricultural products. In the short run, not only do you produce the extra quantities for nothing -- you actually lower the price on all the products. Governmental programs here have tended to make the demand curve at the government price practically perfectly elastic and cut off the lower inelastic section.

2. There is extreme competition from other products. This competition is from nonfood today as well as from food products. Many people have committed future income for items they are presently enjoying, such as automobiles, TV sets, and so forth. Therefore, the pressures to make these payments do compete for the money that could be spent on agricultural products.

As you know, there is also competition from other foods for the consumer's food dollar. As the housewife passes down through one of our modern supermarkets with from 4,000 to 6,000 items, one commodity could be overlooked very easily. If the beef roast doesn't look good, she may substitute a pork roast, or, as the red meat people fear, she may take a chicken. Hamburger may replace pork chops if the pork looks fat. A carbonated drink may replace milk; bananas may replace oranges. As we know today, the competition is keen for high quality food products and other products.

3. Our pricing system is not simple. It is extremely complex. Theoretically, our pricing system relays accurately the consumer's preference back to the producers of the products. Picture if you will how the information may get lost on the way from one of our food stores back to a farmer. Let's look at a lady at a meat market. She is thinking of purchasing pork chops. Her choice is usually among those displayed, without much chance to tell the butcher about the fat that is left on the chops. She either selects or does not select the item. At the same time, she is surveying the other 4,000 items for substitution. If she decides to buy the pork chops, does she buy them because they exactly suit her, or because she has company that especially likes

pork, or because the market is running a special on pork chops? In any case, the information that is started on its journey is that the lady wants more of that particular type of product. The retailer will try to replace his inventory. He, in turn, places an order with the packer for more pork chops or loins. The packer processes many items from a hog. The pork loin is only one of the major items from this particular hog. From the information he receives from the retailer, can he in turn instruct his cutting crew how to cut loins, or can he instruct his buyer on the particular type of hogs that should be purchased for this type of loin?

Then, let's look at the market agency. When the packer says, "We want more hogs to give Mr. Smith some chops," can the market agency send him other hogs of like quality? In some of our research, we have found that some buyers could distinguish quality in live hogs. We have found that other buyers could not. In fact, some of the buyers could have done as well blindfolded with a swinging gate just cutting the hogs at random for quality. Certainly, much is needed, and some of the people at this conference who are doing market service work could do much to assist in relaying consumer preferences back to producers.

Let's take the information one step further. Can the market agency then relay to the farmer the type of hog that is wanted for the chops? Normally the price will reveal the proper quality. But I think without much imagination you can see how this price differential may get lost through this extremely complex pricing system.

4. The product the consumer gets is not what the producer sold. This is tied in with our extremely complex pricing system. Our farmer today is just a part of the total agribusiness industry. He performs the function of producing the raw product. The product the housewife buys in the retail store is changed materially from what the farmer sold. This is in terms of time, space, and product. This steer the farmer sold may be displayed to the consumer as 400 different items. The housewife wants steak, not the whole animal. She wants hamburger, not a live animal. The consumer purchases frozen orange juice, not oranges on a tree in California or Florida. The consumer purchases bottled milk at the house. This milk has been standardized and delivered. It is not the same as that delivered to the milk plant.

With all these principles and problems, can we now expand outlets for agricultural products? My answer is yes. It will take work -- hard work. The people at this conference will play an important part in that work. You were set up to service the marketing segment. I believe that for a long time we have neglected those people in the marketing channels above the farm. It is time now for you to work more with marketing firms. This calls for an expanded program in many States. I am pleased to see that you have included in your program discussions of work with marketing firms. Therefore, it's a challenge to us to work together as a team so that consumers, marketing firms, and farmers will be benefited as we expand outlets for agricultural products.

RECENT RESEARCH RESULTS THAT CAN BE USED IN MARKETING SERVICE PROGRAMS

Outline-summary of address by
Harry C. Trelogan, Director, Marketing Research Division
Agricultural Marketing Service, USDA

My assigned topic is one of vast proportions because your range of interests and activities have broadened and grown since I witnessed the inception of your Marketing Service program just 10 years ago this fall;

Also because the output of marketing research has expanded to the point where I doubt that any individual can keep up with it in its entirety.

It is therefore necessary to establish some bounds for discussion. With few exceptions, I shall confine my remarks to published research appearing since your last Workshop, conducted in whole or part by Federal agencies, that has a distinct bearing on your work.

The research I discuss will represent only a portion of the Federal marketing research and a small proportion indeed of the total now coming out of all agencies.

I. Current Statistics on Market Developments from Periodicals.

(These data are important to keep yourself informed on recent trends and also to indicate the overall importance of marketing and particular segments of agricultural marketing.)

A job still needs to be done to convince our agricultural leadership that marketing is important.

As important, if not more so, than any other phase of agricultural research and service.

One can start with the "Farmer's Share of the Consumer's Dollar" -- get it current from Marketing and Transportant Situation.

This will also give you the marketing bill. $34 billion last year for food compared with $19 billion received by farmers.

To understand the significance of these data and recent trends get Marketing Costs for Food, USDA, Misc. Pub. 708.; and D. B. DeLoach's discussion in the last National Marketing Service Workshop Report, AMS-195.

To get an understanding of these statistics get Agriculture Handbook No. 118, which describes how the statistical series on agricultural costs and charges are constructed and used.

(This is one of a series of volumes being published this year describing each of the major statistical series of the U. S. Department of Agriculture.)

II. Current Information on Market Research Results.

A service man needs to keep informed in a general way on the research publications that are coming out so that he can identify the material related to his own work.

In addition to the trade papers and the scientific journals directly related to his field of interest, the following three publications will give him either brief articles or the titles and references on current research publications.

Agricultural Marketing, published monthly by the USDA.

The Marketing and Transportation Situation, published quarterly by the USDA, and
Agricultural Economics Research, published quarterly by the USDA.

To obtain the titles of current publications, one should examine each month the AMS Checklist of Publications, issued by the Agricultural Marketing Service.

III. Background Information for Service Work on Particular Commodities or Market Functions.

Several types of research studies are useful to the service worker in helping him ascertain the importance of the phase of marketing with which he is concerned in the overall picture, for a particular commodity or group of commodities.

Among these are descriptive studies of particular markets that are believed to have special significance. Cf. recent bulletins of the U. S. Department of Agriculture on: (In requesting any of the publications cited on the following pages, indicate the letters and numbers shown following the title. The letters MRR and AMS mean Marketing Research Report and Agricultural Marketing Service, respectively.)

Seed Marketing Channels. MRR 158

Wholesale Meat Distribution in the San Francisco Bay Area. MRR 165

Domestic Distribution Pattern for Rice. AMS 193

Frozen Prepared Foods 1954-55. MRR 170

The Outlook for Frozen Foods. AMS 154

Fresh Fruit and Vegetable Prepackaging. MRR 154

Raisin Marketing. AMS 204

Also see cost and margin studies related to products and functions. Cf. recent publications of the USDA on:

Food Transportation and What it Costs. Misc. Pub. 738

Lamb Marketing Costs and Margins. MRR. 159

Orange Tree to Breakfast Table. MRR 164

Marketing Costs and Margins for Dairy Products. AMS 172

Milk Distributors Sales and Costs, July-Sept. 1956, April 1957. AMS 180

Marketing Margins and Costs for Fruits and Vegetables. AMS 171

Marketing Margins for Poultry and Eggs in the United States and Selected Cities. AMS 170

Marketing Margins for Beef and Pork. AMS 169

Other types of studies useful in better understanding a market include pricing studies and studies of regulations:

Cf.

Pricing Eggs in Los Angeles. MRR 161

Pricing Eggs at Wholesale in Chicago and St. Louis. MRR 173

State Egg Laws and Regulations. Agriculture Handbook No. 112

The Agricultural Exemption in Interstate Trucking. MRR 118

Highway Transportation Barriers. MRR 157

IV. Research Providing Data and Information Directly Useful for Service Programs.

These publications report results of research dealing with specific problems encountered in marketing agricultural products.

A. Market Facilities -- See James E. Youngblood's discussion in last year's Workshop report.

Wholesale Food Market Facilities, Types of Ownership and Methods of Financing. MRR 160

Livestock Auction Markets in the Southeast - Methods and Facilities. MRR 141

B. Materials Handling and Work Methods -- See William H. Elliott's discussion in last year's Workshop report.

Time and Skill Requirements for Handling Agricultural Products at Fixed Work Places. AMS 197

Methods of Increasing Labor Productivity in Multistory and Small One-floor Grocery Warehouses. MRR 142

Materials Handling in Public Refrigerated Warehouses. MRR 145

Improved Methods of Trimming Produce in Retail Food Stores. MRR 192

Flume Systems for Handling Bulk Stored Potatoes. MRR 177

C. Processing Adjustments

Size of Soybean Oil Mills and Returns to Growers. MRR 121

Conversion of Small Hydraulic Cottonseed Oil Mills. MRR 187

Processing Poultry Byproducts in Poultry Slaughtering Plants. MRR 181

Processed Binders for Cigars. AMS 189

D. Maintaining Quality -- See W. T. Pentzer's paper in last year's Workshop report.

Protecting Perishable Foods During Transportation by Truck. Agriculture Handbook No. 105

Aeration of Grain in Commercial Storages. MRR 178

Losses from Shrinkage and Quality Deterioration of Corn Stored in Country Elevators. AMS 173

Losses from Quality Deterioration and Shrinkage of Corn Resealed on Iowa Farms. AMS 166

Insects in Farm-Stored Wheat. Leaflet 345

Experiments on Distributing Methyl Bromide in Bulk Grain with Aeration Systems. AMS 150

Tests of a Sprinkler System for Hot-Weather Hauling of Live Hogs in Truck Trailers. MRR 172

Peach Hydrocooling, Shipping, and Fungicidal Tests. AMS 199

Maintaining Produce Quality in Retail Stores. Agriculture Handbook 117

E. Measurement of Quality

Equations for Predicting Single-Strand Yarn Strength and Elongation Based on Measures of Raw-Cotton Quality. MRR 197

An Electric Meter for Rapid Measurement of Moisture in Cottonseed. MRR 162

F. Transportation, in addition to costs, regulations, and quality protection research relating to transportation already mentioned.

Transportation of Rice in the South--an economic survey. MRR 140

How Bulk Assembly Changes Milk Marketing Costs. MRR 190

G. Market Outlet Expansion

1. New products: Studies of market potentials and data needed to promote them.

   Potato Flakes (A new form of dehydrated mashed potatoes) Market Position and Consumer Acceptance MRR 186

   Purchasers' Opinions of Frozen Cranberries. MRR 183

   Restaurant Acceptance of Dehydrofrozen Peas. MRR 198

2. Survey data on old products, useful in guiding effective promotional work.

   The Use of Frozen Foods by Restaurants. MRR 144

   Teenage Girls Discuss Their Wardrobes and Their Attitudes toward Cotton and Other Fibers. MRR 155

   Women's Attitudes toward Wool and Other Fibers. MRR 153

   Men's Ownership of Selected Clothing Items and Their Fiber Preferences. AMS 181

   Consumers' Use of and Opinions about Poultry. AMS 159

   Homemakers Appraise Citrus Products, Avocados, Dates, and Raisins. AMS 207

   Survey of Fruit and Tree Nut Use by Frozen Dessert Manufacturers. MRR 146

   Fabrics and Fibers for Passenger Cars. MRR 152

3. Merchandising research intended to indicate improved methods.

   Measuring Weekly Changes in the Movement of Apples and Winter Pears. AMS 148

   Evaluation of Retail Merchandising Practices for Pears, Peanut Butter, and Creamery Butter. MRR 180

This brief review covers:

1. Recent research interpreted to mean research published since your last Workshop a year ago.

2. Accomplished research (not a promise) that has reached a stage warranting publication.

3. A very incomplete review of total marketing research results of the past year. It covers only Federal or Federal-State research jointly conducted, believed to have a bearing on marketing service activities.

Becoming familiar with marketing research literature represents only an initial step toward getting equipped for an effective marketing service program.

Studying the relevant bulletins is only a second step.

This should be followed up by consultation with those who do the research.

These Workshops are intended to facilitate these contacts.

To do an effective service job you need to know many times more than can be written down. This you have to dig out -- through consultation and experience.

You cannot follow the whole show adequately. You must specialize--by commodities, by market functions, by locations.

You must adapt the material to the needs of the clientele you are trying to serve.

We, in research, hope we are developing material that will help as many of you as possible do a better job.

Representative advisory committees tell us the problems being researched are important.

More effective communications between the research workers and the service program workers is essential, if the usefulness of the research is to be fully realized.

THE CHANGING SCENE IN MARKETING AND WHAT PRODUCERS AND MARKETING AGENCIES MUST DO TO MEET IT

A. C. Hoffman
Kraft Foods Company, Chicago, Ill.

So many things have been happening in the food industries in recent years that I hardly know where to begin. There will be time to hit only the highlights of these developments, and I shall have to treat these in cursory fashion. Mainly what I hope to do is to get some topics up on the table for our combined thinking in the discussions to follow.

Changes in Enterprise Scale and Market Structure

The trend toward greater enterprise scale in the food industries was clearly in evidence even before the start of the present century. But it was not until the decade of the 1920's that this trend assumed spectacular proportions.

This was the decade which saw the rise of the corporate grocery chains, many of them operating on a regional basis and the larger ones even on a national basis. Chainstore retailing brought with it the integration of the wholesale and retail functions, which is one of the basic elements of mass distribution, with important implications for producers as we shall see later. A beginning was made in the 1920's for independent retailers and wholesalers to achieve some of the advantages of mass distribution by cooperative methods, but the major developments in this area of the trade were destined to come later.

Developments among food manufacturers in the 1920's toward greater enterprise scale were fully as important as those in the field of food distribution. Except for the large meat packers, there were not many food manufacturers operating on a national basis prior to that time. But within this single decade, national companies came into existence in nearly all the major food lines. Growth was by no means confined to those major companies. Probably even more important was the average increase in enterprise scale on the part of medium-sized and even independently owned enterprises. I think it is correct to say that the basic organizational pattern for mass distribution and mass production in the food industries was laid in the 1920's.

The 1930's were depression years, and then came the war and its aftermath. Such times are not propitious for business growth and expansion, and for the greater part of two decades the trend toward greater enterprise scale in the food industries, as elsewhere in the economy, was largely arrested. There were, of course, some exceptions to this generalization.

But within the past decade and particularly since the Korean War, there has been a general resumption of the trend toward larger business units. This is showing up not only in the food field but in all sectors of the economy.

As a general thing, what seems to have been happening is that relatively small or medium-sized firms have been growing into fairly sizable enterprises with their growth rate considerably higher than that of their larger competitors. This has been especially true in the field of food retailing and wholesaling, where many local chains of independently owned supermarkets have been selling out to larger systems who wanted to expand their operations geographically.

Among the leading food corporations, I should say there has been a relative status quo, as to the proportion of industry shipments made by them during the past several decades. This general conclusion is borne out by the Senate Subcommittee Report (85th Congress) on Concentration in American Industry, with which many of you may be familiar. For meats, dairy products, canned fruits and vegetables, margarine and shortening, and most of the other important food manufacturing lines, the proportion of product handled by the four leading firms in each line is not significantly different from what it was in 1947. In poultry products, the proportion handled by the first four is significantly lower; and in the case of a few other lines, such as flour and flour mixes, the proportion is considerably higher. As all of you know, proportion of shipments accounted for by leading companies, as measured in this manner, is far lower in the food industries than in most other parts of the economy.

It would not be correct to infer that the leading food companies are in a static situation as regards further growth, nor that they have reached the point of diminishing returns with respect to enterprise scale, as some economists have contended. Many of these larger companies, either by acquisition or internal growth, have been adding facilities to round out their geographical coverage. Most of them have also been adding, and probably will continue to add, new products to their established lines. A notable example of this was the recent acquisition of the Swanson Foods Company, which pioneered the developments of many types of prepared quick frozen foods, by the Campbell Soup company. Another is the acquisition of Skippy Peanut Butter by Best Foods.

Still another type of growth by the larger companies is vertical integration into their raw material or supply fields. The effect of this type of intergration is, of course, to carry companies into new fields of enterprise, rather than to add to their share of the market for their end-product lines.

Now what are the forces which are bringing about this trend toward enterprise scale? From the standpoint of the firms involved, the reasons for their continued efforts toward growth and expansion are usually very simple.

One of the main factors making for larger business units is, of course, modern technology. High-speed packaging, continuous rather than batch processing, mechanical grading and sorting, mechanized methods of materials handling--all these things require larger and larger plant units. As a generalization, I think it is correct to say that technological forces have not been so utterly compelling toward multimillion dollar plant installations in food manufacturing and handling as in other parts of the economy; and this is why we have -- and probably will continue to have -- more of a mixture of small, medium-sized, and large units in the food field than in industries like steel, chemicals, paperboard making, etc. But the directional impetus of technology toward larger business units is the same in all fields, and it is fundamental to what has been happening throughout our economy as regards enterprise scale.

In the case of product integration (the addition of new products to the line) the causal factors may be related to economies in distribution rather than to production economies, although some of the latter may be involved. For instance, a food manufacturing firm, which has its own salaried salesmen and its own branch warehouse facilities for selling direct to the retailer, will find that its cost of selling may be somewhat in the nature of a fixed overhead. Sometimes this sales overhead on a per-unit basis can be reduced by putting additional tonnage or additional products through the sales system.

In this connection, the development of modern wholesaling has contributed to the trend toward product integration by food processors. With the increased scale and efficiency of modern wholesaling, the manufacturer operating his own sales branches has faced a severe test for the maintenance of his distribution facilities in competition with the wholesaling of organized independents and corporate chains. The average food processor does not handle nearly the volume through his sales branch which is available to independent wholesalers who service many food processors. In endeavoring to enhance the efficiency of their sales branches, many processors have attempted to add additional products to their line.

Other reasons, of course, are involved in adding products to the line. Most large companies spend considerable money on technical research, they have staffs of engineers and other technicians, big investments in plant facilities, etc. -- all of which represent overhead, which it is to the company's interest to spread over as large a volume as possible. Similarly, advertising and merchandising, which are increasingly important in food products today, tend to make for larger and larger business units. A company which is using media such as national television and magazine advertising should be in position to sell nationally to utilize these types of media.

The reasons for vertical integration (the absorption of additional marketing or handling functions within a single firm) are of a still different type.

The classic example of this is perhaps the integration of the wholesale warehouse functions by the retail chain systems, although the same considerations are involved by vertical integration on the part of large food handlers and manufacturers. Vertical integration, by reason of a closer tie-in between successive marketing stages, also permits some economies in the physical handling of the product. I don't know how one would go about it to measure all the economies of vertical integration, and I do not mean to imply that unintegrated channels are necessarily inefficient. But the benefits to the economy of vertical integration, whether done within a company or by cooperation of smaller unintegrated units, are real and incontrovertible.

In my opinion,government policy itself, as exemplified by the anti-trust laws and various other legislation intended to benefit small business, may have inadvertently and unintentionally tended to encourage both product integration and vertical integration on the part of large firms. When a large company feels that it cannot expand its share of the market for those products which it is presently manufacturing or distributing without running afoul of the antitrust laws, it will seek growth and expansion by entering other fields. Also large buyers are sometimes unable to obtain a price which reflects the lower cost justified by their volume. When confronted with a situation of this kind, the larger user of an item is led naturally to look toward vertical integration as a means of supplying some of his requirements and getting the benefit of the lower costs justified by his usage volume.

I have not seen much comment about this, but when a small company sells out to a larger one, I think you will find that the first approach for the sale is usually made by the seller rather than the buyer. For this, too, there is frequently a very simple reason -- and it is taxes. The owners of many independent enterprises are frequently faced with inheritance taxes which they do not have the liquid capital to meet. The level of income taxes today is such that they have trouble accumulating this capital, and in order to get their assets in liquid form, about the only thing they can do is to sell their business -- either for cash or for saleable stock shares in another company. I am not suggesting that those who receive their income from the ownership of a business should receive special tax considerations, as compared with those who receive like income from wages or salaries I am simply pointing out what frequently lies behind a little notice on the financial page that so and so has sold his business.

Supermarket Retailing

Probably the most important development in food marketing during the past two decades has been supermarket retailing. It is important from several angles. First, the self-service feature and other changes which it has brought in the mechanics of retailing have contributed significantly to more efficient marketing and a reduction in the spread between producer and consumer. But this is only part of it. In addition, the supermarket has brought new concepts of merchandising, of packaging, of product improvement, and in the nature of competition at the retail level. No one connected in any way with agriculture or the food industries can afford to ignore what is happening in today's supermarket.

The supermarket had its origin in the 1930's and was well established as a major factor in retailing before World War II. In the years immediately following the war, new supermarket construction continued at about the same pace as before the war; by 1952, 43% of all food dollars were spent in stores of this type. Contrary to the expectations of some, supermarket construction has taken a new spurt in the past 5 years. As of 1956, approximately 62% of our food moves to consumers through supermarket-type units. Only 27,000 retail food outlets out of a total of more than 300,000 are classified as supermarkets; but these relatively few supers do the bulk of the food business. In addition to the supermarkets, there are some 70,000 retail food stores (commonly referred to as "superettes") which are smaller than the supers but with the self-service feature -- they do about 28% of the grocery business. The remaining 213,000 retail food units are small stores, doing only about 10% of the total.

The position of the well-run independent wholesaler and retailer in the food field is stronger today than it was several decades ago. The reason, of course, is that many of the independents, by banding together in their voluntary and cooperative chains, are able to achieve the economies of mass distribution in much the same manner as the corporates. Voluntary groups, such as I.G.A. and Red and White stores, operate under a common name, have their own brands, operate their own wholesale warehouses, advertise jointly, and so on. Cooperative groups of independents, as distinguised from the voluntaries, are not usually so closely knit in their operating methods, but they do central purchasing and operate wholesale warehouses for their members, as well as render them many other aids in meeting competition. In 1947, 29% of the total grocery business was done by voluntary and cooperative groups of independendents and 34% was done by independents not members of such groups. By 1956, the organized independents were doing 44% of the total grocery business, but the unaffiliated independents were doing only 19%. The share done by the corporate chains during this past 10-year period has remained fairly steady at around 37%.

What the Supermarket Means for the Food Handler and Manufacturer

With so much of our food being marketed today through self-service supermarkets, the success of a brand or a product depends on how often the housewife tosses it into her basket as she goes free-wheeling down the aisle, with literally thousands of food brands and products competing for her favorable attention. No one can foist off on her anything she doesn't want to buy, and her choice is free and final. The successful food manufacturer or handler today is one who can accurately anticipate what the consumer wants; and then, by skillful merchandising, induce her to buy his product.

The competitive and merchandising pace among food manufacturers today is terrific. A well-stocked super will carry between 6,000 and 7,000 different brands and package sizes of food products. It might seem that this would give practically everybody with anything to sell a chance to get his product before a consumer in the supermarket. But this isn't true. It is estimated that there are over 100,000 food items of various brands and sizes competing to get on the supermarket shelf. So the first hurdle the food manufacturer or distributor must overcome is to get his product accepted, or authorized for sale in a supermarket system. Shelf space in a supermarket is very valuable to its operator, and he reserves it for the types of brands and products that move off his shelves.

It has been estimated on the basis of studies that 60% to 70% of the housewife's food shopping in a supermarket is "impulse buying." That is, her decision to buy this or that product is made on the spur of the moment as she is going down the store aisle. Obviously this gives the advantage to the food manufacturer who makes a good product for the price, and then, by skillful merchandising, induces the housewife to buy it.

Good merchandising is a complex and many-sided thing. Even the psychologists are now getting into the act to try to figure out what goes on in the housewife's mind when she shops. Effective selling today involves the judicious use of all types of advertising media, store displays, and other aids to the retailer, an attractive package, and periodic sales drives to put new impetus behind the product. No one of these things in itself is enough. This kind of merchandising is obviously necessary in launching a new product or a new brand; but it is sometimes overlooked that it is necessary even for well-established food brands and items. In these highly competitive times, one must, as Lewis Carroll said many years ago, "run very fast to stay in the same place."

Packaging is an important aspect of today's merchandising. Not only must the package give adequate protection to the product itself until it reaches the housewife's kitchen, but it should be convenient to open and should protect the product as well as possible after the unused portion goes into the kitchen refrigerator. Things like tear-strips for easy opening, screw-off metal caps instead of pry-off caps, inner-leafing for sliced products -- at first thought, these things may not seem very important, but on them may turn the housewife's decision as to how frequently she buys your product. Last but by no means least in packaging today is eye appeal. Probably the most noteworthy example of this is the growing use of foil for outer wraps and labels.

Perhaps I can best illustrate the whole concept of merchandising and what it means to a product with an actual example. I shall take natural Swiss cheese, because I am somewhat familiar with what has happened here, but the same story of product development could be told for numerous other food products.

Prior to World War II, all Swiss cheese was made in big wheels with a hard, unusable rind at least 1/4 inch thick. Swiss cheese went into the retail store in hunks which usually ended up back in the refrigerator, to be brought out only when a consumer occasionally requested a small piece or a few slices. After she got her Swiss cheese home, her family perhaps ate of it once and then it went into the kitchen refrigerator where it would dry out and become something more appropriate to throw at the cat than to eat. In those days the per capita consumption of Swiss cheese was about four-tenths of a pound per year; and, considering the way it was handled, the wonder is that consumers ate as much of it as they did.

Then these things were brought about in the Swiss cheese business. First, Kraft developed a patented method for making Swiss cheese at the factory in rectangular blocks and without any rind after the wax-coated cellophane curing wrapper was removed. This produced an improved basic product and eliminated the rind and cutting losses. At about the same time, the big chemical companies came up with new plastic wrapping materials, which provided means for improved consumer-size packages which help give longer shelf life for handling through the marketing channels. Incidentally, these plastic packages help protect the unused portion in the kitchen refrigerator after the first serving -- a rather considerable thing in itself. Then machines were obtained for use at plant level so that Swiss cheese could be sliced and packaged by mechanical means, thereby eliminating what would otherwise have been a very costly hand operation. With an improved product of this kind, efficiently produced and conveniently and attractively packaged, there was little trouble getting it into the already-crowded dairy cases of the supermarket. All this, coupled with advertising and good merchandising to bring the product to the attention of consumers, has resulted in a current annual per capita consumption of approximately eight-tenths of a pound -- double what it was 10 years ago.

Perhaps we can best sum up what the supermarket means to food manufacturers and producer groups by saying this: If you have what the consumer wants, and if you know how to merchandise it and sell it right, today's supermarket presents an excellent opportunity for you in moving your product to the consumer at the retail level; but it can be a chamber of horrors for the manufacturer or producer who fails to stay up on his toes in these times.

Standardization and Quality Improvement

Supermarket retailing and large-scale handling of foods require greater standardization and quality improvement of produce at the farm end. It seems to me important that farmers and farm groups understand why this is true.

Prior to the advent of mass retailing, there was naturally a great variation among individual retailers as to the quality of produce items they wished to handle. Some catered to a select trade and wanted only the best. Others served the lower income groups or wished to make a price appeal, and they provided at least some kind of outlet for practically anything that came onto the market.

Now the multi-unit supermarket cannot operate on this basis. What he wants is a more standardized product, uniformly graded and packaged, which he can sell in all his stores and to all types of consumers. A chain store buyer has his instructions as to the grade and quality of produce he can buy for his stores. You won't ordinarily find him interested in a carload of wormy apples or a shipment of off-grade butter just because it is cheap, because he has no home for this kind of merchandise.

A year or so ago, Kraft went into the jelly and preserve business. When word of this got around, the company received quite a few letters from local chambers of commerce and college and state marketing officials asking whether we would be interested in strawberries or other kinds of fruit grown locally for which they were trying to develop markets. It fell to my lot to answer these letters, and about all I could write back was, "not interested." I did not write "no" because we are hard-hearted in these situations, and I hope I did not thereby pass what might have been a good deal for Kraft.

But here is what we were up against: Our preserves are advertised nationally and sold from coast to coast. A jar of them sold in Miami has to be the same as one we sold in Keokuk or Butte, Mont. In the case of strawberries, for instance, our Production Department will use only a very few of the many varieties grown, because only these have the body, flavor, and color characteristics we want. Furthermore, the berries must be graded for size, neither over-ripe nor under-ripe, with minimal bacteria counts, and no sticks nor stems nor sand. We require that these standards be uniformly met in quantities aggregating millions of pounds, and this is why we are virtually forced to confine our purchases to specialized growing areas from packers who can guarantee to meet our specifications, in carload after carload. Conceivably, it might have been possible for us to have picked up small lots of acceptable product from some of the non-specialized areas which wrote us, but I'm afraid it would have been a kind of headache for both parties to the transaction. I do not mean to infer that there is no longer any kind of outlet for the heterogeneous type of produce which often comes from the non-specialized grower, but it is not ordinarily well adapted to the needs of the large manufacturer or distributor, for the reasons here given.

Technological Progress in the Food Industries

The statement is sometimes made that the food industries are not making as much progress in the application of modern technology as other segments of the economy, and that this reflects to the detriment of agriculture. It used to be that most statements on agricultural policy made an assertion of this kind as a matter of rote, and for all I know this may still be going on.

Now the matter of technology is a very complex and involved thing, and there are no statistics or economic studies by which to prove or disprove statements of this kind. The historical output-per-man-hour data for different industries, which are compiled by the Bureau of Labor Statistics, cannot be interpreted with reference to this matter, for reasons which are too obvious to need discussion here. About the only people competent to render an informed "guesstimate" about technological progress in different industries are the engineers and technicians who are familiar with the production processes involved, and these gentlemen usually understand enough about the complexity of the matter that they don't go around rendering off-the-cuff opinions about it.

There are, however, some overall figures relating to capital expenditures in the food industries, which would indicate that they are not exactly asleep on this matter of building new plants and moderninzing their existing facilities to utilize modern technological developments. According to the Grocery Manufacturer's Association, the cumulative investment for new plant construction and modernization has totaled about 6 billion dollars for the food industries in the past 10 years. As a specific example, the company for which I work, National Dairy Products Corporation, has been making capital expenditures in recent years at the rate of about 40 million dollars annually, which represents a major share of net earnings after taxes. Our company is justifiably proud of its modern physical facilities, but it is not unique in this respect among progressive food manufacturers, many of which are doing much the same thing.

As applied to the annual market basket which the Government uses for price comparison, the actual wage rate increases paid by manufacturers and distributors from 1952 to 1956 totaled $53. However, machine efficiencies have resulted in cost savings which have enabled the food industries to absorb $26 of the $53, so that only $27 needs to be added to the market basket price on account of higher wages. These figures were presented to the Consumers Subcommittee of the Committee on Agriculture of the House of Representatives by the Grocery Manufacturing Association in May of this year.

I would like to touch briefly on the very important subject of technical research. It seems to me there is a lack of understanding -- or perhaps I should say a lack of information - between agriculture and the food industries on this matter. I have heard many people connected with agriculture discuss research and the need for more of it to expand the consumption of farm products and find new uses for them - which is, of course, commendable. But there is often the implication that nothing very much is presently being done in the way of such research, and it is time everyone woke up and put shoulders to the wheel and maybe we would accomplish something. I also know people in the food industry who are equally naive about the nature and value to everyone, including the food industries, of the technical research being done by public research agencies. Maybe it's time the right hand tries to find out what the left is doing, and vice versa.

The amount of technical research being done by the food industries for the improvement of existing products and the development of new ones has always been considerable, but it has been greatly increased during the past decade. So far as I know, there are no statistics on how much money the food industries themselves spend on technological research. In preparing these remarks, I asked several food technologists, who are more familiar than I with what is being done, for their estimate of research expenditures in the food field. Their guess was that the 25 leading food companies were perhaps spending at least $100,000,000 a year on technological research problems. If these companies are spending even approximately this much, the figure for the whole industry would, of course, be considerably higher.

It would take a full-sized book to describe food industry research. Generally speaking, among its many objectives are these: (1) To improve the quality, palatability, and variety of food products; (2) to reclaim and utilize byproducts; (3) to develop new and more efficient techniques for packaging and processing food products; (4) to reduce loss from spoilage; (5) to discover new food forms, and so on. Food companies, of course, do this research with their own self-interest in mind; but most of it is precisely of the kind needed to expand the market and increase processing efficiency for farm products. Perhaps the best way to get a layman's understanding of the results of it is to spend a day of observation in a supermarket, carefully examining the products arrayed there and comparing them in our mind with what our grandmothers had in their grocery store 50 years ago.

Sometimes I think that we in America take for granted the technological progress which industry, agriculture, and the public agencies have jointly made in providing a bountiful table for the consumer. However we may appraise our own progress, it appears greatly to have impressed the rest of the world. One of the many facets of the cold war seems to be a competition between us and the Russians as to which can put on the most impressive exhibit showing the achievements of his economy at a series of trade fairs being held around the world. Someone on our side recently came up with the idea of showing a replica of an American supermarket at these events, and according to the newspaper accounts, we have been wowing them with it!

Convenience Foods

There has been an amazing development during the past several decades in the so-called convenience foods. This is affecting practically every type of food product, and reaches its apex in the fully prepared meal, needing only to be popped in the oven, taken out and eaten.

According to some recent figures compiled by the Grocery Manufacturers Association, it takes about 5½ hours a day to prepare meals for a family of four with foods and food ingredients of the conventional type. Today comparable menus of easy-to-serve foods can be prepared in only about 1½ hours, a saving of 4 hours a day. This in itself goes a long way to explain why the housewife wants these convenience foods and is willing to pay for them.

Unquestionably and understandably, these convenience foods cost money to produce. The Department of Agriculture figures indicate that the processing and marketing bill for food products rose about 23 billion dollars between 1940 and 1955. Of this increase, about one-fourth -- 6 billion dollars - is attributed to the cost of additional services consumers are buying as part of their food bill. The remaining three-quarters of the increase in the processing-marketing bill is, of course, due to the rise in other cost factors and larger volume.

I have heard it argued by some that this trend toward convenience foods is a bad thing for agriculture. They contend that many consumers' food budgets are limited and they are only going to spend so much money for food, so that if part of this expenditure is for convenience, then they will buy a correspondingly lesser quantity. I am not sure this argument holds water, because I doubt that very many housewives are going to put their families on short rations in order to save housework. I think a pretty good argument can be made that convenience foods and semi-prepared meals are good for agriculture. If mom has a bad day with the kids and is too tired to whip up a big supper for the old man, she is as likely as not to give him a plate of macaroni, with jello for dessert, because both are easy to fix. But if she can reach in the freezer and fish out a precooked piece of meat and some frozen french fries and maybe a frozen pie, the old man and the kids will make off with the meal the ingredients of which may have several times more value at the farm level than the macaroni and jello.

In any case, the decision as to what kinds of foods she wants, and how much convenience she wants built into them, will be made by the housewife. It is the job of the food industries to give her what she wants. If anything in the food field can be predicted with reasonable certainty, I should think it is that the future will see more and not less of convenience foods.

Transportation and Warehousing

The increase in freight and transportation costs is well known to all of you. It seems to me that this may have some significance for the marketing system and for agricultural producers.

The increase in transportation costs is, undoubtedly, having its effect on the location of food processing facilities in relation to producing areas and consuming markets. It is difficult to generalize as to what this effect is, because it will vary depending on the nature of the product and the freight structure into which it falls. Generally speaking, the effect is probably to decentralize processing facilities back into the producing areas. Certainly this would be true when the processing operation greatly reduces the bulk of the product. There will, of course, be some exceptions to this, as in the case of certain products packed in glass, which is itself bulky -- here the effect would be to localize processing plants in major consuming areas. I should think that about all that could be said definitely on this is that transportation costs are so important today that they deserve more attention in the location of physical facilities than they frequently get.

There are no figures to indicate the extent of the trend, but there is no doubt but what the increase in common carrier rates has led some food companies to operate their own over-the-road truck transport equipment. This would be especially true for large firms operating multi-unit plant and sales branch facilities, particularly in cases where they are able to get return loads of raw materials or supplies which they use in their own production processes.

Also, I think we have seen enough of the so-called piggyback operation, which combines the facilities of the railroad and motor truck, to know that this may assume increasing importance in the years ahead. Its advantage is that it combines the local service feature of the motor truck with the economies of rail transportation for the long haul. This type of service should give a relative advantage to producers and growers located long distances from their consuming markets, as compared with nearby producers. You gentlemen are, undoubtedly, more competent then I to appraise this.

As to food warehousing, here again there have been some important developments following World War II. Many of our older warehouse facilities are in buildings not primarily designed for efficient warehousing operations -- they may be multifloored structures, and with insufficient floor strength or ceiling height for modern conditions. The current trend in warehousing is toward one-floor buildings, with high ceilings to accommodate the proper operation of the pallet truck. There has been a great spurt since World War II in the construction of modern warehouses, which places at a considerable disadvantage the food handler whose product must still move through the old-type warehouse.

The trade papers these days frequently carry stories about so-called push-button or automatic warehousing -- you push one button to take the merchandise into the warehouse and you push another button and it comes out. I frankly don't know enough about the mechanics of warehousing to know whether this type of thing is feasible for food products or not. I should think, however, that if it has an important application for foods, it would be mainly in those situations where the in-and-out flow of merchandise can be regularized, with the facilities designed for a specific and specialized type of warehousing operation. But I have long since observed that when these engineers go to work on something like this, they are likely to whip the problem, whatever it is -- and if I were building a new warehouse with my own money, I would at least look into this automatic feature.

I should surmise, and again I have no substantial facts about the matter, that the increase in transportation costs may have some effect on the amount and location of warehouse facilities. Transportation costs are so high these days that shipment in less-than-truckload lots is almost prohibitive for most products. The cost advantage of rail car shipments as compared with truck lots is such that the food handler who is in position to do so might do well to provide ample warehouse space to take bigger shipments at the lowest obtainable transportation cost. Again, most of you gentlemen are perhaps closer to the general warehousing situation than I am and are in better position to assess its significance.

Better Cooperation between Agriculture, the Food Industries and Public Agencies

Finally, I would list better cooperation and understanding between all factors involved - agriculture, the food industry and public agencies -- as a very important element toward progress in agricultural marketing. This working-together is taking many forms, some direct and some indirect in their effect on marketing problems, but all are in the right direction.

One facet of this is the effort being made by food distributors and handlers to help move agricultural products which are in acute surplus. All of you know of the programs along these lines by retailers and food manufacturers, which seem to have become an integral part of our marketing system, as they should be.

Of equal importance are the efforts being made by some of the organized groups of producers to help the trade move their products. We in the dairy industry, of course, know best the very constructive program along these lines by the American Dairymen's Association -- the ADA. Beginning with a fruitful research program to define the problems and opportunities in marketing dairy products, the ADA has gone farther with a very effective network television and other merchandising media to help move these products. They devise seasonal promotions such as June Dairy Month and the October Cheese Festival, to which the trade groups tie in their efforts, for the benefit of everybody involved. Other producer groups are doing similar things, with which you gentlemen are perhaps more familiar than I.

And last but by no means least are the contributions being made by the public agencies having to do with agriculture and the food business. I have reference here to the work of the USDA, the State agricultural colleges, and the programs of the State departments of markets which you represent. I for one think no praise is too high for the work these groups are doing -- perhaps this is because I was once a public servant myself, and know something of the competence and devotion with which men in your capacity approach their tasks.

When "Jim" Crow invited me to speak here he sent me a copy of the proceedings of your last year's workshop at Peoria, and also the publication of the Market Service Programs which describes the projects being carried on in your respective States. I read both of these publications carefully, and I tell you in all sincerity that I think the work you are doing is simply splendid. I thank you for this opportunity to participate in your meeting.

WHAT A STATE DEPARTMENT OF AGRICULTURE SHOULD BE DOING TO MEET THE CHALLENGE OF OUR FAST CHANGING MARKETING SYSTEM

L. Y. Ballentine
North Carolina Department of Agriculture

In outlining the role of State departments of agriculture with respect to meeting the challenge of our fast changing marketing system, I would like first to point out one or two prerequisites to any specific functions we shall mention later in our discussion.

First, I think it is necessary that we recognize our limitations. We need to examine our personnel, our methods, our budgets, and our facilities. If there is need for corrections and improvements, we should try to make them as rapidly as possible.

Second, we should realize that we can only do so much and should therefore use our abilities to the best advantage by cooperating with other agencies, producer groups, tradespeople, etc.

Not until we have resolved these facts will we be able to perform our duties satisfactorily.

Now, let us look more specifically at our responsibilities in the field of marketing. There are many ways in which we could approach this. We could do this by commodities; however, I think it best not to do so because the overlapping changes may be applicable to more than one commodity. Therefore, I have chosen to approach it in a general sort of way, touching on individual commodities only as a matter of emphasis.

We all will agree, I am sure, that our marketing system is complex and that as the rapid changes continue to occur, the complexity of the system becomes more difficult to resolve. We should remember, however, that these changes spell progress and strive to encourage rather than discourage them.

Touching again, only briefly, on the two prerequisites I mentioned to you a moment ago, let me emphasize the need for closely examining the methods we use in promoting more efficient marketing in our respective States. I think we need to ask ourselves several questions very seriously: Are we doing our best? Are we well informed as to how rapidly changes are taking place in our marketing system? Are we using a strong positive approach in effecting these changes?

One of the best ways for a marketing agency to prepare itself to answer these questions affirmatively is for a liberal representation of that agency to participate actively in each of the annual marketing workshops. These workshops are extremely valuable to those of us responsible for administering and conducting marketing programs on a State level. They provide us an excellent chance to learn. We can compare notes, so to speak, and judge ourselves and our methods by what others are doing. In my opinion, the workshops have been very productive, and I think it is timely that we commend those who have been responsible for their success.

Now, to the second point--that of cooperating with other agencies--I cannot overemphasize the importance of this. I am sure there is not a State department of agriculture in our country today sufficiently staffed and adequately equipped to render all of the marketing services needed within that State. The Extension Service cannot do it alone, nor can the U. S. Department of Agriculture. But, by working together, by combining the talents and facilities of the three and by cooperating with other agencies, we can greatly increase marketing efficiency.

Marketing has been defined simply as "getting the product to the consumer." If this were the complete definition, we might assume that our role as a marketing agency would not begin until the product was produced. But this is not the whole story. Where does production end and marketing begin? I am afraid many of us have asked ourselves this question and too often arrived at the wrong answer. There is no possible way to draw a distinct line between the production and marketing of a commodity. We make certain recommendations to producers regarding breeds, types, and varieties. These are not always based on the fact that the recommended breed will make faster gains or the recommended variety will produce higher yields. Instead, they are based on a knowledge of the market. If the market preference is for lean-type hogs, we recommend the production of lean-type hogs. If market preference is for white eggs, we recommend the production of white eggs. If high-protein wheat is in greatest demand,our recommendations are made accordingly. So, in the final analysis, marketing assistance has played an important role even before production gets underway.

I wonder though, if, in the majority of cases, we are not too late with our suggestions, and if we aren't oftentimes prone to wait until our marketing problems reach an advanced stage before we tackle them. Doctors say the best way to fight cancer is to start treatment when the first symptoms appear. Are we following that practice in our marketing service work? To me, there is a close parallel between this policy and the treatment of our agricultural marketing problems. I think we are failing to recognize the early symptoms of many of our problems. We do not seem to see them coming -- we sort of wait until they hit. We are letting them get to the danger stage - where they seriously affect our agricultural economy - before we start doing much about them.

I firmly believe that many of our marketing problems today could have been prevented had we used sufficient foresight and applied the proper treatment. We have been controlled too much by custom and have been too much concerned with our relations with other agencies to get the proper program going in time to meet the needs promptly. We sometimes think too much about who will get the credit, or we are too conscious of infringing on the duties and responsibilities of other agencies to do the best job at the proper time. Remember, if a good job is done, there will be enough credit to go around; and if the job is not done properly and timely, there will not be any credit for anyone.

Our agriculture today, particularly in the field of marketing, is faced with perhaps the most serious crisis in its history. Each year we see production costs increasing, marketing costs rising, and the producer's share of the consumer's dollar getting less and less. We see marketing gluts at harvest time take a heavy toll from the farmer's meager income. We see a surplus of one commodity and a shortage of another. We see hunger on one hand and plentifulness on the other. Why must such conditions exist in a country so richly blessed as ours? Is it because we lack the knowledge necessary to correct them? Or is it because we have failed to make proper application of the knowledge we possess?

I realize the majority of this audience is made up of professional men. And most of you have a better working knowledge in the field of marketing than

I do; but, even to you, I cannot overemphasize the seriousness of the position we are in and the job that lies ahead.

I do not propose to outline any simple and easy method of procedure; neither do I claim to have the answer. But I do want to present to you some of the things that I think State departments of agriculture should be doing and to comment very briefly on how they should go about it.

I have already mentioned the need for self-examination and close cooperation. So, I am going to assume that these two factors need no further comment.

The next step, and perhaps the most important one of all, is that of keeping ourselves informed. This field of marketing is changing entirely too fast for us to gloat over our knowledge of it. Many of the practices we recommended a few years ago are already antiquated. Some of the practices we are recommending today will be outmoded within a short time. But that is progress, you say, and that is what we want. True, it is progress, but we need to keep up with it and to understand its implications.

We need to constantly keep searching for new methods, new ideas and new approaches. We need to familiarize ourselves with all of the latest research information available. We need to keep up with the latest production forecasts. We need to know about State and Federal agricultural legislation; about national and international conditions as they relate to marketing. We need to know about such things as storage holdings and export demand. We need to keep up with changes in consumer preference. And, yes, we even need to know about the weather. You might say we need to be a walking encyclopedia that is being constantly revised.

To me the intangible effects of this knowledge are conceivably more valuable than dollars and cents results. When a marketing specialist, for example, is able to render assistance in a commodity field, he acquires a certain prestige and position of influence with producers of that commodity. His relationship with trade interests becomes more personal and less professional. He is not only able to make further gains in marketing itself, but is able to exercise considerable influence on trade practices, public relations, and other broad features of a healthy enterprise.

Once we have arrived at this point, we are then able to pursue our next objective. And that is, rendering technical assistance in the most effective way possible to those in need of it.

What I will say to you on this matter of technical assistance will be repetitious to some degree of what has already been said. And I repeat it only because we are dealing with such a broad, yet important, field.

First, though, let's define technical assistance as it relates to marketing. Just what is it? My definition of technical assistance is: Bringing together practical knowledge and showing others how to best apply it for improving the marketing of farm products.

When providing technical assistance, we should keep in mind the age-old truth that it is easier to lead then to drive; that the best way to win confidence is to prove your suggestion practical. There is no point in talking about better packaging if you cannot present a better package or better processing if you cannot help a processor do a better job.

Therein lies the key to the effectiveness of our work. We must be sure of what we do, what we say, and what we recommend to others. Custom, you know, is almost sacred to some people, and it is sometimes difficult to get an individual to change a practice handed down to him through the years. We should be ever mindful that much of our market service work involves the problem of resistance to change. We are promoting new ideas, new practices, and new techniques. And there is no better and quicker way for us to fail in this respect than to make a blunder in our recommendations to people who are reluctant to change their way of doing things.

When sure that our recommendations are sound and practical, we should use the most effective means possible to promote their adaptation. And, it is at this point that I am afraid many of us are failing. You might say we too are sort of attached to this idea of custom. We seem to unconsciously join in the attitude that our predecessors handled it this way and lived to retire -- why shouldn't we?

I remind you once again of the suggestion I made earlier, and that is, the need for us to properly appraise our methods. Aren't we just a little behind times with some of them? This is the last half of the Twentieth Century -- the age of change and the age of speed. We should stop coasting and step up the tempo. We should use every available means and opportunity to promote what we know are sound marketing practices -- but keep them modern. Personal contact is perhaps the most effective means, but only so much of this can be done. Therefore, we must rely on other means. And this brings us to another major factor on which I think the State departments should place more emphasis--that is, adequate dissemination of information.

Our people today are looking for help. They want it and they need it. Our radio stations and our television stations are constantly on the lookout for authoritative and helpful information on all major aspects of farming. Our newspapers, likewise, are trying to serve the rural population by keeping them informed on new production and marketing practices. But, all too often, I am afraid, we are failing to utilize these facilities to the fullest extent.

Thus far, I have not mentioned our responsibilities as a regulatory agency. I chose to comment on this only briefly because I think most of the States are doing an excellent job in this area already. I would, however, like to point out to you the close relationship between our service work and our regulatory work. We sometimes think of them as two separate functions, and so does the general public, particularly when strict enforcement is necessary. But, actually, the two should go hand in hand. Essentially, our regulatory functions should be as much a service as any single duty we perform. So, I suggest that we promote our regulatory work in this manner and encourage others to do likewise.

In conclusion, may I remind you again of the responsibilities the State departments of agriculture have in bringing about more efficiency in our marketing system. May I remind you, too, that it is going to require our best efforts, our patience, and a considerable amount of time.

There will continue to be times when it will appear that we are making no progress. And there will always be times of disappointment, discouragement, and dissatisfaction. But if we will properly apply ourselves individually and in cooperation with others, we will get a creditable job done.

A GATEWAY TO THE EXPANSION OF AGRICULTURE

E. Buford Ellington
Tennessee Department of Agriculture

It is indeed a pleasure to see so many representatives of the Federal and State departments of agriculture in attendance at this national marketing service workshop. The title of the meeting indicates that you are here on working assignments. May I welcome you to our State and assure you that all of the representatives of the Tennessee Department of Agriculture who are present will be glad to be of help in making your visit to our State, as well as your work while here, as pleasant as possible.

I understand the purpose of the workshop is to improve marketing service programs being conducted by State departments of agriculture; by your meetings in working groups, to discuss the existing marketing problems, to design plans for solving them, and exchange ideas to determine the best ways to accomplish the objectives.

Emerson once said, "This time, like all other times, is a very good one, if we but know what to do with it." I am sure that all of you in attendance, as experts in your field, will know what to do with it. I am also confident that the results of your thinking will contribute much toward improvement of the present agricultural situation and the future expansion of agriculture in general.

You are familiar with the situation, but may we review, for a moment, some official figures, recently released, which illustrate the situation and point out the current trends.

> During the 5-year period from 1952 through 1956, the national income consistently increased from 290 to 324 billion dollars, an increase of 11.7%.

During the same 5-year period, gross farm income consistently decreased from 36.7 billion to 32.9 billion, a decrease of 10.3%.

By adding the annual losses during the period, we find the accumulated gross farm income loss to be 11.7 billion.

A 10-percent decrease in income seems bad enough, but the net farm income picture is even more alarming. Net farm income decreased during the 5-year period from 14 billion to 11.3 billion, a decrease of 19.3%. The accumulated net income loss since 1952 totals 7.7 billion.

From these figures we note that the accumulated gross income loss exceeds the 1956 total net income. During the period, considerable agricultural expansion has been made through the improvement of communication systems, facilities, marketing methods, the advancement of agricultural chemistry, and development of new uses for certain agricultural products and previously wasted byproducts, to mention a few. Yet on the basis of the figures quoted, from a financial standpoint, we have not gone forward, not even stood still, but have gone backward.

Reliable estimates also show that the farmer's average investment per worker is approximately 3 times greater than the average investment per worker in manufacturing. And if farmers credited their investment with a return of 4-3/4 percent, the return for their labor would be only about 70 cents an hour; yet one dollar an hour is the legal minimum wage, and the average nonfarm worker earns about double this amount. No doubt this is a contributing factor in the population shift from the farms to urban centers and to other types of employment. The trend of this shift has been steady--a decrease from 24 million people on the farm in 1952 to 22 million in 1956. This trend of population shift is likely to continue until agricultural workers receive the justice of an income comparable to that received in other industries.

By using the letters comprising the word AGRICULTURE, an 11-word sentence may be constructed which describes a solution:

"A greater return inspires constructive untiring labors towards unceasing rural expansion."

We all know the formula for agricultural income; that is, volume times price minus cost (taxes, labor, supplies and equipment). Although the overall expansion of agriculture may constitute a problem, I believe the greatest problem facing agriculture as in industry, and one which we should be most concerned about at the moment, is the expansion for greater financial returns.

During the next quarter of a century, efficiency in the marketing structure will have a more determining effect on the future of agriculture, the welfare of the farmer, and how he and his family fare on the farm than will his ability to produce an extra gallon of milk, an extra bushel of grain, bale of cotton, or ton of hay. We seem to have pretty well licked the production techniques and how to apply them. This is evidenced by the increased agricultural production during World War II and since. With the continued development of agricultural chemistry and its proper application, the potential of this American soil remains, as yet, unreached.

The responsibility for the improvement of the situation remains in the hands of three groups: Agricultural service agencies, agricultural trade associations, and the farmers themselves. Naturally, it is not the responsibility of other industries, so we have the obligation of doing our part in improving an industry which benefits all mankind.

There are four approaches to the situation which can broaden the gateway to the expansion of American agriculture and provide greater returns:

1. Securing better information.
2. Developing techniques to reduce or at least stabilize marketing costs and margins.
3. Developing the sale of services as well as goods to an increasing population.
4. Creating a better understanding and good will of all industries and all groups.

We are living in a changing world and are constantly facing economic changes designed to meet the needs as they arise.

A properly informed populace can counteract most any problem which confronts it. Information for farmers, presently released, includes crop and livestock estimates and a great deal of market news. The need for this kind of information is well-recognized. But we should give consideration to the problem of how to compile more accurate information on the item now being covered, how such information can best be disseminated, and when it can be used to the best advantage by the producer.

Price prospects for farm products depend upon growth in population and income, changes in consumer habits and tastes, and innovations in production and marketing methods. Adequate appraisals of the long-run prospects in agriculture are becoming necessary to aid the producer in making profitable adjustments to changing demand and supply conditions. Modern farming requires heavy capital investments and is being faced with increasing production costs. However, the information presently released does not adequately cover the overall economic factors which come into play in modern agriculture at the time the farmer plants his crop.

In order to increase the farmer's income and his share of the consumer's dollar, at the present price levels, we must have either one of two things -- an increase in consumer purchases or a decrease in the marketing margin. Economists tell us that in the years ahead, we might well expect increased incomes and a further improved standard of living. Even in view of that prediction, we should bear in mind that the price of consumer goods must be at a level readily acceptable by the consumer, and at a level which we may describe as advantageously competitive in the scramble for our share of the consumer dollar.

Some may say that the increase in marketing costs may be attributed mostly to the increased volumes of marketing. That has been a factor, but probably not as great a factor as the components of the marketing bill -- namely, labor costs, transportation costs, and other costs and profits, which have received rapid increases during recent years. A good portion of the increased marketing costs has gone to meet the needs and desires of the consumer, especially with respect to food preparation, as the consumer is being attracted by the convenience and time-saving factors.

If the present standard of living is maintained or further improved, I think we cannot expect to see, either in your time or mine, any appreciable reduction in marketing costs. In order to maintain the present standard of living, we can expect even more employment outside of the home by the housewife, which will require that food be prepared to facilitate more convenience and saving of time, or rather additional "built-in maid service."

The application of the convenience and time-saving patterns has no doubt resulted in increased sales to the consumer, but, on the other hand, it has considerably increased marketing costs, which have been, and will continue to be, passed on to the farmer. It is now being paid from a decreasing farm income.

With a big portion of the "overhead" fixed beyond our control, we can favorably affect marketing costs through two channels: (1) Assistance in obtaining greater marketing efficiency through improved equipment, better handling facilities, less deterioration, etc., and (2) reducing marketing costs through the increase in volume of sales. It is partly our responsibility to design services to gain greater marketing "productivity," that is increased sales at the same marketing costs.

The increasing growth in population can be a significant factor. We will need to anticipate the needs and desires of that increasing population. As a rule, many people do not decide upon their needs or desires until "they see it." We will need never-ending scientific research in the development of services to meet the needs of the increasing population.

The basic purchases of the American people may be classified into five categories: (1) Food, (2) clothing, (3) appliances, (4) automobiles, and (5) recreation. All of the industries supplying those basic needs have been, and will continue to be, in competition with each other for their share of the national income. The agricultural industry, with the cooperation of related agencies, may gain its share, through its expansion of service, one of the world's greatest salesmen.

We face a major problem. Our farm population is decreasing. With a corresponding increase in nonfarm population, we need to counteract the general opinion that farmers are a specialized group and getting rich. We need the understanding and good will of all groups. We might well look back to the 1930's when the farm problem was one of the causes of the depression. Naturally we want strong industries and markets, but financially strong farmers are also an essential part of our economic welfare. We need to create a friendlier attitude toward agriculture. We need to acquaint consumers with the agricultural situation as it really is. Then we can sell agriculture as an industry and as an important and integral part of our economy.

PROMOTING MARKETING EFFICIENCY

Herman M. Southworth
Pennsylvania State University

To start with, I want to express my appreciation for this opportunity to present a few ideas to your group on things needing to be done in marketing, and to say how much I regret that I cannot be with you in person both to renew some old acquaintanceships and to exchange views at first hand.

My topic is efficiency, and inevitably I approach it from a research viewpoint. But it is at least the viewpoint of a research worker who has always felt that our work could be greatly aided by closer relationships with the service people, drawing more widely upon their first-hand experience of markets and how they work.

I believe that valuable contributions are often made by people approaching problems from the outside, with a detached point of view that refuses to be cowed by the fact that certain things have always been done in certain ways. In that respect, I am a "long-hair," as my friend John Winfield has called me on past occasions. But I also recognize that the ultimate test of a long-haired idea in marketing is whether it can be made practical enough to be sold to the everyday operators who must put it into practice. And this requires the aid of those like yourselves who see the need for improvements but at the same time understand the viewpoints of the people who will be affected.

As regards efficiency, it is a term used by the physicists and engineers to denote the ratio of energy output to energy input of a machine. This is a very specific meaning. In economics, many use the term much more broadly, some calling almost any kind of improvement an increase in efficiency. For myself, I prefer to restrict it to the narrower meaning of comparing the value of output of an operation or activity to the cost of the resources put into it. We make marketing more efficient, in other words, whenever we manage to do the same job at lower cost, or to do a better job at the same cost -- or with a less-than-proportionate increase in cost.

From this narrower standpoint, not all "improvements" in marketing need involve making it more "efficient." The so-called "action programs," for example, providing price-support loans or imposing marketing quotas or regulating prices or marketings by government order, are not usually justified in the name of efficiency. Rather, their object is equity -- enabling farmers to get a "fair" or "parity" price in the market, or at least some percentage of that price.

Much depends, of course, on one's point of view. Some people do not consider these programs to be improvements anyhow. But many of what we call the "old-line" marketing programs were likewise initiated largely for reasons of equity. This is certainly true of regulatory programs like the Packers and Stockyards Act or the Perishable Agricultural Commodities Act. Their basic purpose is to protect farmers from exploitation by dishonest practices in the market. The service programs like crop reporting, market news, and grading and inspection are rationalized by economists in the name of efficiency, on the ground that they make competition more effective. But as a practical matter, they originated more with the object of helping the farmer get a better price through giving him better knowledge of supply and demand conditions in the market and through enabling him to judge better the quality, and hence the value, of his product. The fact that this promoted efficiency was, I suspect, somewhat incidental.

I have remarked elsewhere that by comparative standards we have a highly efficient marketing system for farm products in the United States. It is the counterpart of our efficient production of farm products.

I have a student from the island of Jamaica, in the British West Indies. He wants to learn how marketing there can be made more efficient. Their marketing is carried on by a large number of small operators -- mostly women -- who scour the countryside picking up small lots of produce here and there which they sell in town. The farmers carry on diversified operations: they grow a little of this and a little of that. Specialization could increase their productivity greatly. But they do not dare specialize because of insecurity of the market. They can't afford to put all their eggs in one basket. Meanwhile, the tourist hotels on the island, a large potential market outlet, import most of their produce from Florida.

Such an example brings home the interdependence of production and marketing efficiency. Without our highly developed, nationwide marketing system, we could not have the highly specialized, efficient system of farm production that we do. By the same token, we could not have our large urban populations employed in highly specialized, efficient, mass-production industries. Cities cannot exist without reliable, day-in-day-out supplies of food at reasonable cost, and big cities must draw on distant sources of supply.

The scope and efficiency of our present marketing system has not for the most part come about as the result of any separately organized, formalized research program. Rather, it developed as the product of on-the-spot application of imagination and ingenuity by the people engaged in the job. It is a reflection of the American tradition of searching out better ways of doing things.

As our society has become increasingly scientific and technological, however, we have learned to organize and systematize this search, to specialize in it, and hence to move ahead with it faster. In all phases of economic life, including farm production, systematic research has demonstrated its contribution to progress.

The desirability of the same approach for increasing the efficiency of agricultural marketing was formally recognized in the Research and Marketing Act. The Act likewise recognized the need for a coordinated program of educational and service work to get the results of research put to widespread use.

The expanded program of research, educational, and service work under this Act has paid off in a number of directions. In the case of efficiency, it has demonstrated the contribution that systematic study can make in improving the operations of individual firms in almost any phase of marketing. The rising wage rates that have characterized our whole economy in recent years have put particular pressure upon labor-saving -- upon finding ways to increase the productivity of labor in all types of marketing operations.

We have combined industrial engineering with economics in tackling this problem. Wherever we have systematically applied these techniques the answer has been the same. Substantial savings can be made simply by better organization and management of labor on existing jobs. Still greater savings can be made through mechanization of the jobs -- use of mechanical loaders, dumpers, sorters, conveyors; of lift-trucks, pallets, and unitized loads -- in general through devices and methods that substitute machine for hand power in performing the multiplicity of handling operations that make up so large a part of marketing. And still further savings can typically be made through analysis of a plant's operation as a whole so as to eliminate needless activities and lay out those that remain, often with improvements in equipment, to achieve the most efficient flow of materials from one job to the next.

We find these savings possible wherever we look--in packing plants, storage warehouses, processing plants, wholesale establishments, retail stores. Even the comparatively efficient, low-cost establishments typically have particular operations that can be improved. And for the average plant the possibilities of savings are usually substantial.

In this area of operational efficiency in the individual plant, the basic principles have been pretty well developed. We are reasonably current on our basic research. The big job ahead is getting widespread application to the myriad operations involved in marketing. Our applications to date, valuable as they have been, have above all served to demonstrate the magnitude of the savings potentially possible.

With the basic principles fairly well laid down, the task of application approaches a service-type operation -- one in which service-agency personnel, given adequate technical training, can carry a large share of the burden of getting the research recommendations put into widespread practice. This should become increasingly true as the research people further consolidate and routinize their methods. The most efficient research job will be done by using a team approach, in which the research workers give general guidance and focus their main attention upon new or special problems, while service workers carry much of the load of applying the principles to the general run of specific situations.

The area of work I have been describing is the one in which we have made the greatest progress in demonstrating possibilities of improving marketing efficiency. We have devoted considerable effort to it. And it is an area where results are most quickly applied. This is because they can be put into effect by the individual proprietor acting on his own. Once the benefits have been demonstrated to him, he has a direct personal incentive to adopt the improvements. If he doesn't, competition is likely to force him to it.

But this area of work by no means exhausts the opportunities for increasing efficiency -- nor even necessarily presents the greatest opportunities in the long run. The improvements possible in an individual plant are, after all, limited by the system of which it is a part. We see this in our studies of wholesale markets. No matter how well laid out the plant of an individual establishment, or how well it organizes its internal operations, it cannot do a really efficient job if it is located at a distance from the railroad siding where its supplies come in, for example, or in a market district where narrow streets and traffic congestion prevent the proper access of trucks.

The correction of situations of this kind is another area to which we have devoted considerable attention. In fact, we had a substantial program for modernization of market facilities going before we got really underway with the work on plant efficiency. It is an area in which we have made considerable progress, and this progress seems to be accelerating. Here likewise we have the basic principles pretty well worked out, and service people are taking a very active part in teaming up with the research workers to get the job done.

But progress in this area is inevitably more gradual than in the case of single-plant studies simply because the needed improvements cannot be put into effect by single operators acting independently. They require bringing together all the different groups concerned in the market to agree on a program that they will all support.

In describing situations of this kind, the sociologists talk about what they call "veto groups." These are groups that, although they have only a minority interest in the action being considered, nevertheless are in a position to delay it, or restrict it, or even to block it altogether. In market facilities work, and in other improvements that require concerted group action, we commonly have to contend with veto groups. This is a problem on which service people who work in and know the market in question can make a particular contribution, by identifying the groups that will drag their feet, anticipating their position, and devising ways to win them over or get around them.

Improvement of market facilities is perhaps the foremost area in which we have systematically worked on making improvements in efficiency involving group action. There are many other possibilities that ought to be worked on more. John D. Black, of Harvard, addressing a marketing service group back in 1947, soon after the Research and Marketing Act was passed, stated as a chief guidepost that the greatest opportunities for improvement in marketing would be through the reorganization of whole marketing systems. I am afraid that we have not yet carried this advice of his very far.

One area that comes under this heading is pricing and trade. My economist colleagues have developed a field of research that some call "pricing efficiency." It involves analyzing the distribution of a commodity -- distribution among markets, among different uses, and, over time, between current consumption and storage -- in comparison with the distribution that would occur with perfect competition in pricing. The actual pricing structure is judged more or less "efficient" according to how well the distribution that results from it corresponds to the perfectly competitive model.

This can be a useful type of research. But I have a little reservation about attaching the name "efficiency" to it. It does not seem to me to involve the clearcut input-output type of analysis to which I would prefer to restrict that term.

Now there is an input-output aspect to pricing and trade that my colleagues have not given the attention it deserves. Trade is costly -- as you people who work in the market well know. Not all marketing costs are accounted for in picking things up and putting them down -- in packing, packaging, processing, sorting, loading, unloading, shipping, storing -- in the physical handling operations of marketing. A lot of time and energy is used simply in the buying and selling of products -- in accomplishing the successive transfers of ownership that are necessary between the steer on the range and the steak on the dinner table. This time and energy may be spent efficiently or inefficiently.

We economists have not given this matter as much thought as we should, perhaps because the principles in which most of us were trained turn our attention in other directions. Traditional economic theory rather takes for granted that products somehow get bought and sold. It ignores the costs of this process, and worries instead chiefly about the prices that result -- whether they are competitively arrived at, and whether they promote the most desirable allocation of resources and of incomes. This is an important matter. But the costs ought not to be ignored.

Actually, of course, trading methods and practices present problems that service people have been concerned with. I remember a few years ago at the Texas Marketing Workshop, that Webster Birdsall of New York propounded to us the question how to provide a system for pricing apples in the Hudson Valley, that were largely being picked up by truckers seeking return loads to take back South. The New York market no longer provided a basis, and nothing had developed to take its place. I am afraid he left the Workshop feeling we had not been of much help to him.

Again, as I mentioned before, we economists justify services like market news and grading on the ground that they "facilitate trade." But we have not been of too much help to the administrators of these programs in giving them a scientific basis for deciding how much they should spend on these programs or where they should spend it to get the best results. These are problems that should be approachable in terms of costs and efficiency.

Trade in farm products is carried on in many different ways, varying widely in degree and form of organization. Itinerant truckers bargain directly with farmers for apples or for a few calves. At the other extreme, on the highly organized, highly mechanized Chicago Board of Trade all the trading is done by specialized brokers and all transactions are continuously recorded, posted on the board, and wired all over the country. Between these extremes are all the different auctions, stockyards, terminals with other systems of organizing trade, contract buying practices, call boards, offer-and-acceptance arrangements, sales by sample, sales by continuous display as in the retail supermarket -- you people are more familiar than I with the great variety of trading systems and practices found in United States markets, and with the time spent both in direct participation of buyers and sellers or their agents and in providing the varied supporting services necessary to their operation.

So far as I know, no one has attempted a comprehensive, systematic analysis of these alternative methods in terms of comparative costs of operation in relation to the amounts of trading accomplished. In fact, I don't believe we even know what their costs really are, let alone the criteria that determine which methods are most efficient for different commodities, different volumes of trade, and different numbers and types of buyers and sellers. We have been too interested in the equity aspects of prices, and in overall resource allocation problems, to get down to the practical details of the costs involved in trading.

Yet this matter might have far-reaching implications. For example, I wonder whether inefficiency in organizing trade to meet the needs of small independent operators may have been one factor in the advantage that large chain organizations enjoyed in marketing? In any event, I suspect that the growth of large buying organizations has altered many markets in ways that may have undermined the efficiency of trading operations in them. Certainly the rise of truck transportation reduced the efficiency of existing methods of market news collection and forced us to seek new ways -- though we may not have thought of the problem in these terms.

The very proliferation of methods of trading suggests that considerable imagination and ingenuity went into their historical development. It also suggests that they must vary in efficiency, and that some that represented important advances in the circumstances under which they were first adopted may now be outmoded so far as efficiently meeting today's needs is concerned, or in terms of taking advantage of today's technological improvements in communication and transmission of information.

In any event, I would like to suggest that the same kind of systematic research that we have applied to efficiency of plant operations might profitably be tried on efficiency of trading operations. This is a field that I suspect our research people might have been led into sooner had we had closer working relationships with the marketing service people.

Trading efficiency, then, illustrates one area, closely tied to marketing service work, where greater application of the efficiency approach might pay off. Another relates to standards and grading. Historically, of course, this is an ancient field of marketing work. A regulatory worker whose job has always intrigued me was the ale tester of Old England. His job was to make the rounds of the inns and taverns. In each place he would buy a stein of ale, pour it in a seat, and sit down in it. (They wore leather breeches in those days.) After sitting the required length of time he would try to get up. If he stuck fast--couldn't get up without the chair coming up with him--he arrested the innkeeper for sugaring his ale.

This was perhaps not an inefficient method of operation for the time, though I am sure we would devise a quicker test nowadays. We have made considerable progress in improving grading techniques and devising instruments for more rapid and more precise testing.

But I am concerned with grading not so much from the input or cost side as from the standpoint of output. Are we sufficiently forward-looking in anticipating changing needs for quality information in a time of rapid technological progress? I will not mention the way in which quality preferences in tobacco have recently been overturned, since this is a controversial matter and one that perhaps could not have been anticipated anyway. But what about cotton? We have put great emphasis upon utilization research to improve the competitive position of cotton, and we have devised various new treatments and processing methods that greatly increase its versatility. I have no technical knowledge in this field, but I have gained the impression that different cottons lend themselves in differing degrees to these treatments, and that this affects the quality of end-products. I know that these problems are being worked upon in the laboratory, and I cannot but wonder whether we may be handicapping our cotton marketing program by adhering to what has perhaps become an inefficient method of grading--inefficient in terms of failing to identify quality characteristics that have become important in modern fiber technology and that ought to be taken account of in the market.

There are other commodities for which changing technology of utilization in industry or in the home--or even changing methods of handling in the market itself--are altering or adding to the quality factors needing identification in the market. I understand the sound reasons for waiting upon trade demand before moving toward modification of officially promulgated standards. But especially at a time when we are specifically promoting wider markets, I wonder whether a more aggressive policy might not be desirable, not necessarily for modifying standards, but at least for supplementing them with additional information that will help buyers identify products suited in quality for the uses they wish to make of them. This would involve some broadening of our concepts of the role of grades and standards in efficient marketing.

The pursuit of efficiency is a never-ending job. For what is an efficient operation must always be measured relative to the particular situation. And in our changing economy, situations are constantly changing and operating needs change with them. Furthermore, new opportunities for efficiencies keep arising out of the technological advances that our scientific society constantly brings forth. New sources of power, new types of equipment, new processing methods, new means of communication, new management tools, all open up new needs and new possibilities for applications in making marketing more efficient.

And these applications typically offer opportunities for fruitful cooperation between research workers and you marketing service people who have first-hand contact with the industries engaged in marketing, the people in these industries, and their problems.

FRUITS AND VEGETABLES

Work Group Sessions

HOW WE USE MARKETING INFORMATION IN PLANNING PROMOTION PROGRAMS

George H. Chick
Maine Department of Agriculture

In discussing the topic assigned to me this morning, I have assumed that the marketing information needed for a well-rounded promotion program is available to a marketing specialist if he has the know-how and is willing to seek it out at its various sources.

Some of the information is already published by either the Crop Reporting Board or the Market News Service. However, our marketing specialists find that they can secure additional information from such agencies as the Federal-State Inspection Service, the Federal Marketing Order Committee, the Maine Potato Tax Committee, and the Maine Potato Council, as well as vast stores of information from wholesalers and retailers in the terminal markets.

I think I can safely say that our program starts during the growing season when all of our specialists follow closely the various reports of the New England

and U. S. crop reporters. As the digging season approaches, they start to evaluate the crops in our various competing areas. This is very important. As an illustration, if the studies indicate that some area like Pennsylvania or Ohio will have a short crop, this information is channeled to the Maine shippers who normally supply those areas; and we would start an active service and promotion campaign in those markets at an early date. I might say that it is of equal importance to find out if an area has a large and extremely good quality crop, so as to emphasize our work in other areas until the local supply has either been moved or substantially reduced.

When our crop is harvested, we watch very closely the progress of a survey carried on cooperatively by the Potato Marketing Order Committee, the Federal-State Inspection Service, and the Maine Agricultural Experiment Station, in which they size the potatoes from the fields as they are dug in order to have a pretty good idea of the size of the potatoes that will be harvested. Several hundred fields are analyzed in this survey.

Some other valuable information that is compiled for the use of our marketing specialists is as follows: As the potatoes are harvested, any grower who wishes to sell potatoes for processing, particularly to potato chip manufacturers, can request an analysis of the specific gravity of his field. A. C. Hazlett of the Maine Agricultural Extension Service, cooperating with personnel from the Federal-State Inspection Office, has set up a laboratory at the Aroostook farm. Samples are taken from the field to this laboratory where specific gravity tests are run and all growers having potatoes that are suitable for processing are listed. The information is forwarded to our office for the use of our service men when contacting potato processors in the market. I should state that these tests are followed closely by some processors who contact growers direct after the results are known; and many growers and shippers, when the tests show their potatoes suitable for processing, actively sell their own product.

When we start shipping potatoes, our market men watch the daily report from the Market News Office very closely to get the destination of shipments. Watching the shipments enables us to evaluate the demand from the markets; and as soon as we see any major market begin to take Maine potatoes in volume, we then have our service men start working with the trade to help speed up the movement of potatoes and increase the volume still further if possible. When service work has been completed in a market or area, we often use the Market News Reports to check shipments to see if we can note an increased flow of potatoes to those markets.

Another factor that we find is very helpful in the Market News Report at times is the following: One of our marketing specialists was working in the vicinity of the Pittsburgh market. He noticed that a few cars were being moved into Pittsburgh, and the price in the Market News Report on one car was down due to poor quality. He immediately went to Pittsburgh to check and found that a truck of potatoes had arrived in the market showing quite a bit of breakdown from late blight. He checked with the shipper and also the Federal-State

Inspection Office and found that this truck was loaded in Maine showing less than 2% defects, although it did show some late blight of a very minor nature. The shipper, in checking, found that the truck--and I might say that it could have been a car--had been in transit six days and was held over at a truck terminal. The weather was warm and humid; and the late blight was active and caused deterioration, which I am sure you all are familiar with.

We have also had cases where trucks or cars have been in distress due to potatoes deteriorating from freezing in transit or field frost that breaks down during shipment. We occasionally have cars underweight, due to careless weighing at shipping point. We have also had trouble with breaking of poly bags that are poorly made or the material too thin for the job. Another difficulty we often encounter is the opening of bags in transit due to improper closing at shipping point. We feel that it is valuable service to our shippers and receivers alike to straighten out these situations, and we find many times that the receiver reciprocates by being even more of a booster of Maine potatoes.

While our men do not make settlements or adjustments on these distressed cars or trucks, we act as a disinterested party and frequently tell the shippers if we believe the fault was at that end. In some cases, we have been able to show that the fault was at the receiving end and have corrected some practices that were causing loss and deterioration in the markets.

A little bit more about some of our work in the market. When we first arrive in a market, we survey that market to not only notice the quality of our own potatoes, but that of our competitors as well. If the market seems to be pretty well supplied with what we call ordinary-run potatoes, we then encourage the receiver to stock and promote superior brands of Maine potatoes and offer to put on store displays and supply their outlets with point-of-sale material.

Some other market information that we use very carefully in planning our service work is checking the freight rates from specific markets from Maine, and the freight rates from our major competing areas. It is by checking the comparative freight rates that we find it to our advantage to promote Russet Burbanks in our Eastern and Southern markets rather than working into the Chicago area and points west, where one of our chief competitors would have the advantage in freight rates.

One other phase of our work that we find is very important is this: The Potato Tax Committee carries on an advertising and promotion program with funds of their own which is entirely outside of our own work. This year they probably will advertise, using newspapers and television, in approximately nine major markets. My assistant, Mr. Charron, will sit in on all of the planning so as to be informed of all the details of this advertising work.

We, in turn, will coordinate our market service work so that we can have men in the markets prior to the breaking of the advertising, to make sure that an ample supply of potatoes is available for the consumers and that all trade sources are well informed of the advertising program to come. Our market men are able to get on TV stations with food editors and farm directors, speak to service clubs, and supply TV stations and other clubs with movies which we find are used extensively. I believe that Mr. Charron has brought one of the movies to show at this workshop.

We find that this preliminary work is extremely important, as it enables the potato industry to get maximum advantage from their advertising by having adequate quantities of Maine potatoes in the market before the advertising promotion starts. We find that the agency handling the advertising for the Maine Potato Council feels that our service work is very important to the overall program; and on numerous occasions when presenting a proposed program, they have emphasized the importance of the service work carried on by the Department of Agriculture.

Not too long ago, we had a visitor in our office from one of the Southern markets, and he commented on the fine advertising that the local papers had carried on a Maine product that we were not interested in. However, he did state that he couldn't understand why they were advertising, as he had tried several times to find the product in the market and was unable to do so. The point I am trying to make is that no advertising program will be effective unless the product being advertised is available in the market in ample supply.

In preparing this talk, I asked for comments from market service men who are in the field. I noticed a comment by one of them which may not be in the field of my topic but is of enough importance that I believe I should mention it. He states: "In developing a market service program in the market, I feel that you should always be watching for young, progressive receivers who are anxious to develop and expand their business. They are more receptive to new ideas and changes than some of the oldtime wholesalers who, many times, resist changes."

In conclusion I would like to urge on all States the desirability of taking what I call a positive approach in promoting their potatoes or any other products. By this I mean to expand the outlets for your product by pointing out the better grading, better sizing, or better quality, and the assistance you can offer in merchandising. You should never try to expand your market by knocking neighboring States' products. We who are interested in agriculture are anxious to expand markets for our products; and by working together as a team, we can do this. We often find that in helping arrange store displays, it is to our advantage to help display the competitor's product or suggest the freshening up of the display in order to make it more attractive to the consumer.

I have tried to point out in my talk the type of information we use in our promotion program, and I am sure that George Goldsborough in his talk will be a little more specific as to where a lot of this information can be found. There is a lot of information available to develop a marketing program. Let us show a little more initiative and analyze and put information to work to sell our products.

TYPES AND SOURCES OF MARKET INFORMATION NEEDED FOR EXPANDING OUTLETS FOR FRUITS AND VEGETABLES

George H. Goldsborough
Market Development Branch
Agricultural Marketing Service, USDA

According to the program, George Chick and I are to devote our attention to the kinds of information needed to assist in the movement of seasonal surpluses and those needed for a long-time program of increasing sales. While it seems to me there is considerable overlap in the types of information needed for short-and long-time programs, there are some distinct differences in the requirements. In addition, there are differences in requirements for various crops and various States. For example, States which produce a large volume of a specific commodity or commodities, and which must market the major proportion of the crop in out-of-State consuming areas probably require a more highly organized marketing and promotional system than producing areas located in the midst of large consuming centers. A somewhat different approach is appropriate when you are concerned with moving a "hot" item such as highly perishable vegetables for fresh consumption in contrast to late potatoes or apples which may be held in storage and marketed over a matter of months rather than days or weeks or products for which processing outlets are available.

It is my opinion, and this is purely personal, that permanent and continuing market development should be the prime objective of marketing service workers interested in expanding outlets. Permanent and continuing development can gradually reduce the number of "fires" you have to extinguish.

I. Information Needed on Volume and Price Prospects

A. Production

1. Historical:

Marketing service workers engaged in a market expansion program need to know the historical pattern of production, including: (1) A volume series by areas within the State and for principal outside competing areas; (2) characteristics of the production, such as varieties, since there may be variation in use (for instance, the Florida Valencia orange is considered to be excellent for frozen concentrate) and whether it is an annual vegetable or a tree fruit which takes several years to bring into production; (3) the number of producers and average size of unit in each local area. The marketing problem is normally much more difficult where a large number of small producers is involved. As a corollary, of course, it is the small producer who is likely to need your help the most.

2. Current:

Marketing organizations need to have up-to-date production estimates by varieties for local and competing areas, accurate information regarding the harvest period and date and length of time of peak movement, in order to evaluate possible seasonal surplus situations. By knowing production estimates for local and competing areas, marketing service workers can determine well in advance which particular products are likely to require their close attention and the preparation of special promotional campaigns.

B. Stocks

Surplus situations may build up for less perishable products and processed products without unusually heavy current crop production, due to inventory buildup. Marketing service workers need to know stocks in cold storage and common storage by States and by principal markets normally served by the areas in their States. Information on stocks held in wholesaler and chain warehouses and in retail stores would also be helpful, though it is not presently available. It would be desirable to have such data by variety and size and type of package.

C. Prices and Supplies

1. Farm prices:

It is essential to have a wide variety of price information. A historical series of farm prices by variety and for fresh consumption or processing would be important in pointing up which products and product forms require the most market development assistance over the longer term. Current series of this nature, perhaps even daily for highly perishable crops, would be most helpful to the producer in deciding which outlet will yield the greatest returns.

2. Market prices and supplies:

Recent changes in the marketing structure for fruits and vegetables have brought about a need for detailed price and supply reporting in local areas, including assembly or shipping points, and local consuming centers. The decentralization of packing and processing and the bypassing of terminal markets and direct selling at country points require that such information be reported by grade, size, and quality.

Market news covering retail prices and movement, though not presently available, would be quite helpful in evaluating the possibilities for short-time market expansion in selected areas and in appraising the effect of promotion.

I doubt if there is much need for my discussing the sources of such data. As I understand it, the State departments of agriculture, under the matching-fund marketing service program and with State funds alone, are in many areas engaged in projects to further refine and improve crop estimating and to augment market news reporting by experimental coverage for local assembly areas and markets not now being reported.

In researching this subject, I have come to the conclusion that the major gaps in crop estimating are the lack of grade information on production and prices to farmers and insufficient breakdown of the data by local producing areas. For market news it seems to me that techniques should be developed and utilized to more adequately reflect truck movement, to cover additional local assembly markets and local consuming centers, to cover retail prices and movement and to more accurately show grade and type of container. Accurate reflection of grade differentials from the retail level to the farm would help translate consumer acceptability of various qualities and encourage production adjustments to meet these preferences.

II. Information Needed to Fully Utilize Market Potential

Now let's turn our attention to the data needed in the marketplace where the ultimate demand for farm products is exercised.

A. Marketing Facilities and Buyers

Marketing service workers should be in a position to advise producers and local marketing agencies on the names and addresses of brokers, trucker buyers, wholesale and retail store buyers, canners, dryers, and freezers in the State and adjacent areas, with supplementary data on products handled or produced, volume, brands, plant capacity, and credit rating. Sources of such information are the "Packer Red Book," "Packer Fresh Year Book Issue, Part II," "Produce Blue Book," "Frozen Foods Processors Directory," and "Canners Directory," and various trade associations such as the National Association of Food Chains, National Association of Retail Grocers, and National Association of Frozen Food Packers.

In addition to being able to advise producers and marketing agencies on the nature and accessibility of the various facilities, service workers should make it their business to be on a first-name basis with the key people involved, whether they be the produce buyers of corporate chains, frozen food processors in nearby States, commissary officers at a military post and procurement centers, or even individual itinerant truckers. All other things being equal, success of promotion campaigns depends on friendship, personal contact and mutual respect. In addition, these key people should be supplied with brief, frequent, fact sheets covering up-to-date information on volume by qualities and varieties, sources of supply, and harvesting periods.

B. Per Capita Consumption

Agencies endeavoring to expand markets need more detailed per capita data to effectively concentrate their efforts on the areas and types of people of low consumption. In the spring of 1955, the USDA made a nationwide survey of household food consumption which yielded information on per capita consumption by the four census regions--Northeast, North Central, South and West--by urbanization (that is, rural farm, rural nonfarm, and urban) and by family income within regions. There are rather striking differences in per capita consumption for the various regions. For example, the average per capita consumption of fresh carrots was almost 3 times as high in the West as the South; conversely the per capita consumption of fresh cabbage in the South was twice that in the West. Here is one that surprised me--on a per capita basis, Southerners consumed only 25 percent as many fresh strawberries as consumers in the North Central region and only 50 percent of the quantity consumed per capita in the West and Northeast. Similar data are available for other fresh products and for various frozen and canned products. Similar studies were made in 1942 and 1948. It might be well for you to trace regional trends for specific commodities in the 3 periods to ascertain which products have the more favorable consumption patterns.

The citrus industry stays right on top of the per capita situation through the use of a private reporting service supported jointly by the industry and the USDA. Per capita household purchases of the various fresh and processed citrus fruits and a few competing products are reported each month for the United States; each quarter by five regions; and each year by family characteristics, including income, education and occupation of family head, presence of children in various age groups, age of housewife, and size of family. The citrus industry and the USDA also jointly finance a contract with a private organization for a semiannual report on the availability of fresh and processed citrus products in retail stores of various sizes and types (independent or chain) by 5 regions, city size, and for New York, Chicago, and Los Angeles. These reports indicate the potential retail outlets which do not offer the consumer an opportunity to buy specific items. For example, in August 1957, fresh oranges were available in 93 percent of the stores in the Pacific region compared to 51 percent of stores in the South and 73 percent of the stores in the Mountain-Southwest region. Availability was also directly related to size and type of store and city size.

With these and other data, the citrus marketing and promotional agencies have a rather clearly defined market profile. They know where, and have an indication of how, to concentrate their efforts in consumer advertising and dealer service. In dealer service work, for example, the first item of business is to insure that the store stocks a product, and next to obtain better and more effective display and in-store promotions. Information on per capita consumption on a State basis for fruits and vegetables is not presently available.

Should you desire per capita consumption data for individual markets for selected products, and should you desire refinements to indicate the relative position of items from your State compared to items from competing areas, you can obtain some fair approximations by reviewing unload data, to the extent they are available, and comparing these with population estimates. Population in intercensal years may be approximated by using the most recent census year as a base and estimating increases by using statistical projections and data from chambers of commerce, phone and other utility hookups, and possibly other sources. Greater precision on quantity can be obtained by reviewing the purchase records of wholesalers and chain stores. In either event, you should spend some time in the market observing whether or not the products from your State are available at retail and how they stack up quality-wise with products from other States.

Following is summarized some State work in this connection:

In 1951, retail store tests were conducted in a Kentucky market for sweetpotatoes, sweetcorn, and potatoes for 2-to-4-week periods to evaluate the sales of locally grown products compared to shipped-in products (not Kentucky-grown). The work was done by the University of Kentucky.

Results - Sweetcorn:

1. Appearance, color, and quality were the 3 main factors purchasers gave in this study; shipped-in yellow corn accounted for 67 percent of total sales in competition with white corn locally grown.

2. Price was not an influencing factor although yellow corn was slightly higher.

Results - Sweetpotatoes:

1. Although higher priced, shipped-in sweetpotatoes outsold local potatoes.

2. Forty-nine percent of purchasers indicated size and quality as reasons for buying.

3. Only 6 percent indicated price as a buying factor.

C. Merchandising

Marketing service workers need to keep abreast of trends in merchandising of agricultural products in order to advise marketing agencies in their areas attempting to enhance their positions in the market and to obtain the cooperation of retailers in using improved techniques for expanding retail sales. As most of you realize, methods of retailing and merchandising have changed dramatically since the end of World War II. The initiation and expansion of nonfood departments in food stores give nonfoods an additional shot at the consumer dollar. In addition most food is now sold through supermarkets and superettes, and the retailer depends to a large extent on improved merchandising techniques to increase sales. This is particularly true for impulse items, such as many fresh fruits and vegetables. An increasing number of stores are featuring prepackaged produce. It is estimated that in 1956, about 20 percent of the produce was sold in prepackaged form. Most prepackaging was done at the retail level.

While merchandising research on a formal basis is in its infancy, the tests to date have established a number of broad principles. Variety in package and product size is known to be an important factor affecting total store sales and sales within departments. In an experiment just completed, it was learned that sales of unpitted dates were increased 60 percent in a combination display of 12, 24, and 32-ounce packages over the usual technique of 12-ounce packages alone. In conducting retail store experiments in Pittsburgh, Pa., it was found, contrary to trade opinion, that a combination display of medium-size and large pears in bulk and various sizes of packages resulted in sales one-fourth larger than sales from a display of medium-size pears alone. In an experiment with apples, the findings indicated that a combination display of bagged and bulk apples, priced in 5-pound units, increased apple sales significantly over previous methods of retailing. Sales increased still further when bagged apples were offered in "catch weights," varying from 2 to 6 pounds. The increased sales apparently resulted from added variety. Some customers preferred to select apples and pears from bulk displays, others preferred the convenience of bags. Maximum sales were achieved by satisfying both types of customers.

The chain organization with which this work was conducted has adopted some of the findings relating to variety, with gratifying results in terms of increased tonnage, especially for apples. These results are also finding their way into use not only in chain stores but also in independent outlets.

As another principle, visibility of the product is very important. Many consumers do not like to buy a product which they cannot visually inspect. In an experimental test relating to visibility, tomatoes were offered in transparent plastic tubes and in standard cardboard containers. Despite a 3-cent price premium, retailing tomatoes in plastic tubes, based on sales per 100 customers, proved to be the most acceptable merchandising method. It might be added that the organization in which this test was conducted has continued the use of plastic tubes for packaged tomatoes. Visibility of unattractive merchandise, of course, will reduce sales of produce.

Another merchandising principle that we have experienced in our work involves larger pricing units. Results of some of the controlled experiments indicated that sales of lettuce, carrots, mushrooms, and pears can be increased by the use of pricing units somewhat larger than those in current use. Many current pricing units result from trying to keep the total value under certain levels. Some of these levels are no higher today than they were during depression years, when incomes and price levels were much lower.

Another general merchandising principle is that of cleanliness. Any product must be clean if it is to have consumer appeal and cause the consumer to decide to buy. In an experiment on potatoes, results indicated a considerable potential in building sales through the simple practice of washing off soil.

Merchandising research findings on processed fruits and vegetables are somewhat more limited than on fresh produce. Work was done in Pittsburgh, Pa., to evaluate consumer preferences for red sour cherries in the 20-ounce No. 2 can and the 16-ounce No. 303 can. In spite of the strong trend among canners towards the use of the 303 can, the results indicated that consumers, when confronted with an unbiased choice in the retail store, purchased 5 of the larger cans to 4 of the smaller ones, or 39 percent more cherries in the larger cans.

In a study conducted by the National Canners Association, an appraisal was made of the sales impact of multiple-unit packs for canned corn. Displays of 2-, 3-, 4-, and 6-can packs with and without single displays were tested. The most effective technique was a combination display of the 3-can pack and single can.

A recent study was made of the relative sales and cost effects of various types of formal and informal end displays of canned fruits and vegetables and the results will soon be available.

D. Product Development

Recently a major food manufacturer commented that many of the products presently being marketed by his firm were not in existence 7 years ago. New and improved products offer a real opportunity to expand outlets for farm products.

State departments of agriculture can make significant contributions to the testing of such new products. For example, a market test for potato flakes, a new form of dehydrated mashed potatoes developed by the Agricultural Research Service, was conducted by the marketing research division, AMS, in the triple-cities area of Binghamton, Endicott, and Johnson City, N. Y. during the summer of 1956. Assessment of the commercial possibilities of this product, marketed under the State of Maine brand, was made by a combination of two techniques, a retail store audit and consumer survey. Cooperating in this endeavor with USDA were the Maine Agricultural Experiment Station, the Maine Potato Commission, and the Maine State Department of Agriculture. The Maine Potato Commission provided the raw materials to be processed into potato flakes and the funds for packaging and distributing the test product; extended the services of their advertising agencies for preparing the advertising and promotional materials; and provided the funds for the advertising and promotional campaign in the market test area. The Maine State Department of Agriculture provided the services of merchandising specialists to work directly with wholesale and retail operators in distributing the test product, as well as working on the package design of the product. Results of the test were so promising that a number of food distributors have made contracts with processors and are nearly ready for distribution.

We also participate in market tests with agricultural producer-processor groups, such as those represented by the Florida Citrus Commission, which may develop product innovations on their own designed to benefit the industry as a whole. The Commission is an agency of the State government responsible for expanding the market for Florida citrus fruit. A market test of frozen grapefruit sections was conducted in Erie, Pa., in 1954, to determine consumer acceptance of this new product form. Results showed that the frozen sections added to total demand for grapefruit.

E. Trade and Consumer Preferences and Attitudes

In reviewing your last annual report, I noted that wholesaler and retailer surveys were being used rather extensively by some State departments of agriculture to provide trade opinions on the desirable qualities of specific products, types of package, promotion programs of suppliers, and other factors which might provide leads on means of expanding outlets by more effectively meeting consumer demand. Such opinion surveys can be helpful, but I hasten to caution you against relying solely on these opinions. In our research, both in merchandising and consumer preference, we have found some rather strongly entrenched trade opinions relative to consumer behavior to be incorrect. May I suggest that such surveys be accompanied, wherever possible, by analysis of warehouse or store records to obtain data on inventories, receipts, volume of sales, and prices of different products sold or new packages used. This is a relatively inexpensive technique and affords an indication of consumer acceptance.

In the Market Development Branch, considerable work has been conducted, through household interviews, on consumer use, preferences, and opinions of fresh and processed fruits and vegetables, including citrus fruit, apples, pears, canned and frozen cherries, avocados, dates, and raisins.

These studies were designed to reveal consumers' use of and opinions about the flavor, texture, color, size, and other factors important to the marketing and promotion of fruit and vegetable products. This is a rather expensive technique, but such data help eliminate costly trial and error in maximizing market opportunities. A study presently in manuscript stage will reveal consumers' attitudes and opinions toward existing retail package sizes for selected canned and frozen food items, the use of and opinions about labeling data, available home storage space for canned and frozen foods, and problems associated with home storage.

In addition to the general food preference studies, two reports have been issued on taste-preference findings from controlled consumer panel experiments. One on preferences for canned orange juice varying in Brix-acid ratio showed a bi-model preference structure for relatively sweet and relatively tart juices among those who liked canned orange juice. For canned grapefruit juices, it was found that sweetened juices were preferred over unsweetened, and labeled juices over unlabeled. An additional study is now under way on preferences for quality factors in frozen peas, and systematic studies of other frozen and canned fruits and vegetables are contemplated for the future.

I should like to make some comments in regard to measuring statistically the results of sales promotion campaigns. The usual research technique is to count noses of listeners or readers to determine their degree of awareness or memory of the advertising message. This can be done. But it does not measure response in terms of dollars and cents, which is most meaningful to those who support promotional campaigns.

What do promotion programs mean in terms of increasing or maintaining sales of or prices for a product? Is the promotion program affecting the course of net returns received, and how much? These are the really important questions which need to be answered. Measuring the effects of a promotion program for products that have been long on the market is quite difficult, because usually there has been some prior promotion of some kind, leaving certain accumulative effects, and because the variables are numerous and somewhat difficult to tie down. For new or improved products or products of unusually low per capita consumption in an area, promotion programs are likely to show more dramatic sales results.

The technique we in AMS employ to assist in evaluating the short-run effects of promotional efforts in a city is through the use of a retail audit of sales in a stratified random sample of food stores during three different time periods of equal length, before promotion, during promotion, and after promotion. When this technique is used, a direct comparison of sales between the periods can be made only when all factors affecting sales other than promotion remain the same during the periods. However, this is never the case. In fact, the most constant characteristic of the market is change. Some of the quantifiable factors likely to affect the sales of an item at the retail level are price of that item, prices and promotion of competing products, and display space and availability of the item being promoted. A number of these and other factors frequently change between the periods being compared, and allowances must be made for their effect upon sales.

It should be noted that, in this technique, the prepromotional period is the only benchmark for measuring change in sales, if any, during the promotional period. Furthermore, only single periods are available for comparison. Consequently, there is less chance of detecting results which might have occurred purely because of some unusual condition. These limitations can be reduced by the addition of a nonpromotion city, which we will call the control city. In addition to comparing sales results between time periods, an additional check can be obtained by comparing the change in sales between cities during like time periods.

To be most useful as a guide, a control city should be as comparable as possible in major respects to the test city in factors such as size of population, per capita disposable income, types of industry, and geographical location. If several pairs of matching control and promotion cities could be used, the results would be still more reliable and the need for statistical adjustments reduced to a minimum.

Conclusions

To expand outlets, marketing specialists should: (1) Disseminate information on standards and quality which should result in increased sales; (2) devote your attention to areas that are lagging in consumption of specified fruits and vegetables, both fresh and processed; (3) endeavor to obtain larger retail availability of fruits and vegetables, and the use of better merchandising techniques; (4) insure that producers and processors have the best information possible on how to advertise and promote; (5) pull together the available market development information and the research findings issued by the USDA and State universities and assist processors, distributors, and retailers in applying these results; and (6) bring problems needing research to the attention of researchers in the USDA and State colleges.

CONCLUSIONS AND RECOMMENDATIONS

Work group on marketing information needed in a program to expand outlets for fruits and vegetables

Attendance at this session included 39 persons -- two from the AMS, USDA, Matching Fund Program, State Departments of Agriculture, Liaison, and 37 from State and Territorial departments of agriculture. There were 27 States and Territories represented.

Two papers were presented as a basis for group discussion. George H. Chick, Maine Department of Agriculture, presented "How We Use Marketing Information in Planning Promotion Programs." He demonstrated in detail how and with what results marketing information is used to service Maine potato growers and shippers. Mr. Chick showed that good and timely information supplied data and facts to shippers, buyers, receivers, sellers, and consumers, which held and expanded markets for Maine potatoes.

George H. Goldsborough, AMS, USDA, presented "Types and Sources of Market Information Needed for Expanding Outlets for Fruits and Vegetables." This paper described the great variety of information sources that are available and from which a researcher or marketing service specialist can derive specific data to solve a specific problem or service a special need. He demonstrated how statistical and informational sources can be used and how unavailable information can be procured through special projects in order to expand markets, to measure the effects of a promotional program, and to find out the nature of demand.

Market specialists from eleven States briefly reported how positive results in expanding or holding markets had been accomplished by means of collecting and disseminating information. Types of information found most valuable for marketing perishable fruits and vegetables included rapid and detailed dissemination of market news on availability of supplies, prices at country buying points, prices at wholesale centers in areas of consumption, and information on competitive sources of supply. Use of rapid teletype circuits covering an entire State was reported highly effective to stabilize prices received by producers, to dispel rumor and to discourage unfair practices. This type and manner of providing information was effective in strawberries.

Making supply, price, quality, and container information on fruits and vegetables widely available to truckers and potential buyers was found to be effective, particularly in moving crops from localized areas of supply. This has expanded markets for apples, melons, vegetables, and other crops in local areas where buyers do not concentrate their efforts ordinarily.

The providing, procuring, or exchanging of current information through face-to-face contacts and close liaison between State marketing specialists and private tradesmen in the trucking, wholesaling, retailing, and processing areas of agriculture and food marketing were reported highly effective in those States that have developed these working relationships.

The discussion pointed up the fact that a State marketing service staff or person needs to know all the published and non-published information sources. The most effective and positive service comes from how well he can adjust or adapt the best sources of information to the needs of particular commodity groups and individual growers who wish to expand market outlets. The usefulness and reputation the service worker gains with agriculture in his State will depend on the value, reliability, and timeliness of the information he can channel to his farmer, shipper, and general agricultural marketing clientele.

Specific recommendations coming from this work group included the following:

1. The marketing divisions or bureaus of States are urged to take a positive approach in promoting their products through the device of providing and using information adapted to needs of specific groups or individuals. Information should be put to work.

2. Market news information at shipping and receiving points should be enlarged by Federal-State appropriations throughout the Nation. An aim should be to increase local supply information on fruits and vegetables not now well reported.

3. Wider dissemination of market news and special information should be made available on a timely basis to all potential buyers of fruits and vegetables within the potential market area. This includes servicing the transient trucker, buyer, and all wholesale, brokerage, and retail outlets.

4. A closer liaison and coordination of all Federal and State information collecting and disseminating services should be accomplished to prevent duplication and overlapping and to acquire the fullest use of available personnel to develop and disseminate information. This would include within each State

joint planning and work-load division among such agencies as the agricultural experiment stations of agricultural colleges, the Agricultural Extension Service, the Federal-State Crop and Livestock Reporting Services, Federal-State Market News Services, and market bureaus and divisions of State agriculture departments.

EFFECTIVE APPROACHES TO THE PROBLEM OF IMPROVING QUALITY AND SECURING UNIFORMITY IN PACKING FRUITS AND VEGETABLES

W. J. Kuhrt
California Department of Agriculture

In California, our approach to quality improvement and uniformity for our agricultural products moves along three principal avenues, namely, the minimum standards in our Agricultural Code, inspection and certification by Federal-State shipping-point inspection upon the basis of Federal grades, and, lastly, inspection and certification against mandatory minimum standards made effective under Federal and State marketing orders. I shall endeavor to outline briefly the application and effectiveness of each of these methods.

The minimum standards in the California Agricultural Code cover approximately 35 fruits, nuts, and vegetables as to quality, condition, and maturity, but do not cover minimum size. These standards do, however, include specifications for standard packages and packaging for 19 of these products. The minimum standards have been enacted over the past 42 years by our State legislature, largely at the request of industry leaders. These standards are enforced by county agricultural commissioners and their inspectors, operating under the supervision of our State Bureau of Fruit and Vegetable Standardization. Fifty-two counties in the State carry on inspection work. In 1956, 113,685,000 packages were inspected. Of this total, there were 11,759 rejections involving 830,545 packages. Inspection is on a so-called "spot" basis so that these figures do not represent total shipments.

For this work, the counties employed about 425 men, counting both permanent and seasonal help. Our Bureau of Fruit and Vegetable Standardization has a staff of 21 permanent employees on fruits and vegetables, of which 12 are supervisory and 9 operate 5 highway inspection stations, aided by 13 seasonal inspectors.

Practically all of the work done in the counties, as well as the supervision by the Bureau, is paid for by general fund appropriations. In a few counties, special fees are charged on certain crops such as lettuce and carrots for which complete inspection and certification are performed. In addition, under special legislation, the Bureau inspects all canning tomatoes, totaling around 2,800,000 tons in 1956. This activity requires a staff of around 425 inspectors for this work.

Shipping Point Inspection:

During the 1956-57 fiscal year, our Bureau of Federal-State Shipping Point Inspection made a total of 156,646 inspections on the basis of United States standards. In addition, 310,447 tons of Bartlett and fall and winter pears were inspected against marketing order grades. Also, 7,725,261 pounds of walnut meats were inspected on the basis of Federal grades. Altogether, the volume covered by Federal-State shipping-point inspection totaled 174,021 carlot equivalents.

For this service, the Bureau collected $1,696,490 in fees, of which $1,161,299 were for the regular commercial inspections and $535,191 were for inspection work under Federal and State marketing orders. During the peak month of August 1956, a maximum of 297 inspectors were employed. Certificates were issued for 47 different products, but the major volumes of products inspected were of potatoes, grapes, lettuce, celery, and oranges.

State and Federal Marketing Programs:

In 1956-57, there were 16 active marketing programs under California State law involving quality standards. All programs except that for cling peaches utilized State standardization of Federal-State shipping point inspectors. The number of inspectors and the tonnage inspected are included in the totals for these agencies. For cling peaches, around 350 inspectors were required to inspect a total of 530,000 tons for processing purposes.

In addition to the 16 active State programs, there were 9 active Federal marketing programs involving grades and standards. Some of these Federal programs involve interstate shipments of certain products also under State programs. Altogether, State and Federal programs cover grades and standards for 21 separate commodities.

Under marketing orders, all inspections are paid for either directly to the inspection agency or out of industry assessments. In 1956, over $1,000,000 was collected for inspection purposes. Some of this was paid to the Bureau of Federal-State Shipping Point Inspection for inspection services, some was paid to the Bureau of Fruit and Vegetable Standardization for supervision of county inspectors, and some by the advisory boards themselves for inspection and supervision.

I have not included the quality improvement and standardization work of our fruit and vegetable cooperative and private marketing organizations. These agencies, over the years, particularly those with brand promotions, such as Sunkist, Blue Anchor, Del Monte, Calavo, and others, have made valuable contributions to quality improvement, especially in the earlier years. In more recent years, these agencies have called upon official agencies for inspections, to implement their own quality improvement programs.

A good example of what can be accomplished under marketing orders to improve quality is the Canning Cling Peach Marketing Order established pursuant to the California Marketing Act of 1937. The Agricultural Code of California does not contain grade standards for canning commodities except for canning tomatoes.

The marketing order provides for inspection of cling peaches, at the time of delivery by producers to processors, pursuant to grade standards and general procedures outlined therein. More specific procedures pursuant to the Marketing Order are spelled out in administrative rules and regulations issued by the Director of Agriculture, after recommendation by the Cling Peach Advisory Board.

Ordinarily, the only grade authorized is the Number 1 grade of cling peach. This grade is very carefully defined in detail in the Marketing Order. The purpose is to obtain a canned or frozen product of "Choice" grade, as such grade is generally known in the canning industry.

During the harvest season, each load or lot of cling peaches is inspected on a random sample basis at inspection stations maintained by the Cling Peach Advisory Board in the various cling peach production areas. The number of samples drawn from the lot are two boxes out of the first 100 boxes in the lot and one box out of each additional 100 boxes, or fraction thereof. The Marketing Order requires that the selection of sample boxes shall be determined on a mathematical basis, with the intention that any box, regardless of its position in the lot, will have as much chance of being selected as any other box. To accomplish this, a card system has been devised under which the inspector draws a card with a number which tells him which particular pallets in the lot are subject to inspection. He then pulls another card which designates the box in the pallet which is to be inspected. In other words, everything possible is done within practical limitations to leave to statistical chance the particular sample box to be inspected. This is important in order to prevent the "stacking" of loads.

Each load is given a tolerance of 15 percent to pass inspection, even though the industry average the past season was just under 6 percent by weight. If the load exceeds 15 percent, it is rejected and the grower takes the load back for reconditioning. If the load is within the 15 percent tolerance, the grower is docked for the weight of the off-grade or culls in the load, based on the cull percentage determined by the inspection. The canner in turn must divert tonnage from the cannery process equivalent to the weight of the fruit for which the grower was docked. The diversion at the cannery is checked by diversion inspectors at the cannery. The number of inspectors at the inspection stations and at the cannery totals more than 350 at the height of the season.

At the end of the season, all canners' records pertaining to cling peaches are audited to check for compliance with diversion requirements, and to determine the exact quantity of cling peaches on which various assessments are to be collected pursuant to the Marketing Order.

The total cost of the inspection program during the 1957 harvest season amounts to approximately $596,000, or a cost of approximately $1.12 per ton for the more than 532,000 tons of cling peaches received through the inspection stations.

Over the years, the definition of the grade standards has been made stricter. At the same time, the inspection procedures to comply with the grade standards have been carefully spelled out. The random sampling, along with strict compliance with high quality standards, has resulted in a quality control program that requires the grower to deliver a better grade of fruit, of proper size and maturity, to the canner. This requires the grower to be more selective in the picking of cling peaches to meet the quality, size, and maturity requirements. This, of course, means the grower has some higher labor costs, in spite of rapid advances in technology.

There are also higher costs borne both by the grower and the processor through the administrative assessment of the marketing order. One of these costs is the use of a special 500-W tungsten filament lamp under which peaches of questionable or borderline maturity are tested by means of a color disc established as the right color for the flesh of the peach to be of minimum maturity.

An accomplishment of the inspection program has been to provide consumers with a better quality fruit during a period when there has been more than an adequate supply, thus preventing additional demoralizing of the market price structure.

Another accomplishment has been to bring growers and canners together to discuss their common problems and to have a better understanding of each other's problems. Cling peach growers have certainly become more quality conscious and have a much better understanding of marketing problems, and have come to realize that the consumer is ultimately the one who decides how well cling peaches will fare in the competitive market for canned fruit. This has resulted in continual improvement in the quality of the raw product that goes into the can.

Now as to the effectiveness of these three approaches to quality improvement and uniformity, I would say that each one has made a contribution to the problem, but no one single approach has been adequate to cover our full requirements, and we shall need all three methods for some time to come.

The minimum standards of our Agricultural Code give a broad coverage to our principal fruits and vegetables. The service, except for tomatoes, is on a spot inspection basis, is relatively inexpensive, and has local county support as well as legislative support. However, the standards are relatively loose, there is still some variation between counties, and there is a serious lack of flexibility, since important changes must be made by the legislature biennially.

The standard package or container provision, and the packaging provisions have worked out well with some crops, but not too well with others. Products which can be measured or sized, such as oranges, can be packed in standard-sized containers; but nonstandard products, such as head lettuce, frequently do not fit well in a standard container; and, when oversize heads are forced into a container designed for smaller heads, so much crushing results that a serious question is raised as to the value of such efforts to standardize.

The use of Federal-State inspection in California indicates that this service is generally acceptable. It is used primarily on truck and car loads being shipped to out-of-State or distant markets, and forms the basis for sale and purchase of many of our products. The service provides a uniform application of Federal grades, and inspection certificates are well known and accepted in the fruit and vegetable trade throughout the country.

On the other hand, this service does not prevent the marketing of low-grade products (some shippers request certificates only on a part of their better grades) and in seasons of surplus, our farmers believe that the poorer grades of products should not be marketed in fresh channels direct to consumers. Coupled with this, the service requires a great deal of reasonably skilled manpower at relatively high rates of pay, so that this voluntary service becomes quite expensive. (Our rate is now $12 per car.)

The third approach, through Federal and State marketing programs, has worked out quite well in California on the products for which these programs have been used. The minimum standards are usually high enough to insure a good quality of product. Inspection is required, and the product usually cannot be marketed without a certificate. The inspection is generally uniform in application because adequate supervision is provided. The minimum standards are flexible and can be changed quickly to meet emergency conditions. Most of these minimum standards include grade, size, maturity, and, in some cases, packing. A minimum of enforcement is required, since the standards are voted into effect by the industry itself, and there is general industry support. Furthermore, in seasons of oversupply, restrictions can be set up which reduce or prohibit the marketing of the lower grades.

There are some problems also in this method. Complete 100 percent inspection and certification is expensive, although at times the volume inspected helps to cut down per-unit costs. Also, care must be exercised in raising minimum grades and minimum sizes so as not to create too great a hardship upon growers with preponderantly low grades or small sizes, or both. Federal law provides for exemptions, but our California Marketing Act does not authorize exemptions. There are limits to how far the use of such standards may be applied on the problem of surplus control.

Altogether, wherever marketing orders are used, our farmers and handlers have obtained their quality improvement and standardization objectives more quickly and more uniformly through use of marketing orders than by any other means. This method of quality improvement and standardization is well received by our producers, processors, and distributors, the wholesale fruit and vegetable trade, and consumers. It is likely that more and more of our crops will make use of these techniques in the coming years.

It must be evident by now that our farmers, in many commodity groups, are convinced of the value of marketing good-quality products, and they have supported the establishment of laws and procedures to insure effectuation of these convictions. I think an impartial appraisal would indicate that for quite a few of our products an acceptable level of quality and standardization has been attained. But we are far from reaching such a level for all of the commodities we produce and ship. We still have some growers and shippers who try to "stove pipe the barrel," as we used to call it back in New York State. But we continue to make improvements each year, and the trend is definitely in favor of good quality and a standardized pack.

IMPROVEMENTS NEEDED IN THE QUALITY, PACKAGING, AND HANDLING OF FRUITS AND VEGETABLES FROM THE VIEWPOINT OF THE RETAILER

R. A. Kelly
University of Illinois

During this workshop, your attention has been called to a large number of U. S. Department of Agriculture publications dealing with various aspects of marketing. Your name is on, or may be put on, the mailing list for such reports. These publications may be supplemented by others from the various experiment stations and trade organizations. Therefore, instead of attempting any resumé of quality from research reports, I will discuss some problems and principles involved in obtaining and maintaining quality of fresh fruits and vegetables.

In 1956, more than 100 fresh fruits and vegetables were sold commercially; 76 of them had 142 standard grades. This fresh produce was sold by 27,000 licensed dealers to 350,000 retail food stores, which in turn sold it to more than 43 million families for about 4½ billion dollars. Another 3 billion dollars' worth of fresh fruits and vegetables were sold through eating establishments.

Experience has taught many food merchants that it is necessary for them to sell quality products. They have learned that fancy quality produce requires the least amount of selling effort and that poor quality requires expert salesmanship.

We can solve no marketing problem permanently so long as we live in a freely competitive economy with a dynamic marketing system. The function, then, of representatives of public institutions is to recognize present inefficiencies and help to eliminate or minimize them, to analyze the effects of changes that are occurring, and to try to avoid future difficulties. They should anticipate what is coming and provide information to the industry that will enable each segment to adjust quickly and efficiently to changing conditions.

To do this job, it is necessary to determine relationships between quantities consumed and the various factors that affect consumption. Consumer tastes and preferences are constantly changing; they are not subject to definitive, objective measurement. In the long run, we can be of most help if we will adapt our efforts to consumers' motivations instead of trying to change them to our way of thinking.

Consumer purchases of fresh fruits and vegetables depend on many things. Among them is attractiveness of the retail display. The effect of modern buildings, gleaming equipment, attractive packaging, and reasonable prices may be more than offset by the presence of a single display item that does not have eye appeal. Just one or two "off-quality" fruits or vegetables may be enough to create an unfavorable reaction in the mind of the customer, and a sale will be lost.

Demand at the farm level is determined not only by ultimate consumers, but by all buyers and sellers who transfer and transform farm produce into consumable products for retail stores and eating establishments. Often the action of these intermediaries is determined only partly by consumers, or by what they think consumers will want. The rest is based on their own opinions. They think the consumer ought to do thus and so, regardless of what the consumer really wants to do or will do.

Hence, it is not always in the producer's best interest to grow and deliver exactly the quality that the primary receivers would like to have. To illustrate, for 3 years 1 buyer who purchases large quantities of peaches in southern Illinois bought only Orchard Run and Unclassified fruit which he retailed in the principal markets for Illinois peaches at a lower price than U. S. No. 1 sold for at the shipping point. To compete, other buyers had to buy lower quality, or get peaches at a lower price, or cut the retail price for No. 1's. In my opinion, the result was that No. 1 fruit sold for less than it would have if each buyer had bought good quality.

That is one aspect of maintaining quality. Another is retaining original quality during marketing. It is estimated that, exclusive of trimming for display, 11 percent of the fruit and 8 percent of the vegetables are lost through quality deterioration during marketing. Research indicates that in many instances the losses are even greater. To illustrate, during a particular season one chain food retailer in Chicago allowed store managers a 40-percent shrinkage in tubed tomatoes. A South Carolina study showed 43 percent shrinkage from the time tomatoes were ready for harvest until they were sold at retail in Jacksonville, Fla.

A considerable amount of work has been done on maintaining quality of mature peaches through retail channels. We have been looking for a suitable package. The ideal container should be insulated to keep the fruit cool and yet ventilate it during refrigeration; solid so that the slats will not bruise the fruit and yet open enough to cool it; rigid to eliminate flexing during loading and in transit and yet flexible enough to yield to the fruit; tough and yet transparent enough to see through; attractive and appealing and inexpensive enough to keep the fruit out of the luxury class. There is probably no one container that will meet all of these demands, but we must continually look for one that is more satisfactory than our present packages.

In Oregon this past summer, a shipper was packing peaches in 2 layer trays in various ways: With both layers wrapped, with the top layer wrapped and the bottom unwrapped, with both layers in cups, with the bottom layer in cups and the top wrapped, and with the bottom layer wrapped and the top in cups. He was packing any way the broker wished. Interestingly enough, he was shipping his peaches more than 2,000 miles and was satisfied with the returns.

Some fruits and vegetables are often out of the price range many consumers will pay. By maintaining high marketable quality, producers and agents can reduce physical losses so that they can market the produce at a price that will appeal to a larger segment of the consuming public.

Because Chicago is one of the largest terminal markets in the country, I thought you might be interested in what the men who are spending money for produce from your States think about the fruit and vegetable marketing system. I, therefore, contacted the produce buyers and merchandisers of the chains, wholesalers on South Water Market, and several other people in the industry, to see how they felt about the quality of produce they are getting for distribution at the retail level. Here are some of the weaknesses as they see them.

1. Many of the men feel that the present system of Federal-State inspection needs to be modified. USDA grades are permissive; they can be used or not used. But if they are used, the inspection should be mandatory, and all handlers should adhere to the grades. Inspectors should have authority to require the grade marking to be changed whenever inspection shows that the fruit or vegetable does not meet grade requirements.

2. The classification of the original packer is infrequently used when the produce leaves the original container. It is seldom identified by grade in retail outlets, whether displayed in bulk or in repacked containers. Grade and quality regulations should be promulgated for repacked merchandise. Laws governing interstate movement should be enacted, and those concerning the net weight of merchandise in each container should be enforced. Often the net weight is below that printed on the package.

3. There should be greater cooperation (and less rivalry) between the inspection service and city bureaus of standards so that the work can be coordinated.

4. Some States need a better system of obtaining inspectors. A few operate under a "spoils" system, and it is impossible to train and retain conscientious, efficient personnel.

5. The grading system should be workable in the marketplace and should be oriented to the preferences of consumers. In other words, it should permit

consumers to communicate their preferences through the trade to producers. There is no regulation to protect the consumer from rot, decay, etc. Certainly a customer has the right of inspection at the time of purchase, but how does one conveniently see all fruit or vegetables in a large or sealed package? In case of dissatisfaction, the only recourse is another trip to the store to ask for an exchange. If produce is merchandised in packages, quality should be specified on the package.

6. Present grades for some fresh fruits and vegetables permit too much size and maturity variation for today's merchandising procedures. Extreme differences should be eliminated. The amount of printing or the color on many packages does not permit adequate examination of the contents. For example: Some bags cover the tips and tops of carrots, leaving visible only a small part in the center of the carrot. Some containers, such as cardboard boxes for tubed tomatoes, leave only peepholes through which to see the produce. Improvements are continuously being made, and retailers should be made cognizant of the effect of different packages on sales.

7. One merchandiser likes "vine-ripened" tomatoes. Why? Because his customers accept them to about the same degree as greenhouse tomatoes. He estimated that he could increase his sales by 25 percent if he could get enough "vine-ripened" tomatoes to meet his needs. After examining his records, I am inclined to agree.

The produce industry is very conscious of defects and damage. Producers and handlers can do little or nothing about excessive rainfall or drouth or about hot or cold weather. But they can control, at least to some extent, damage or loss caused by delays in transit, unduly long storage, temperature changes in and out of storage, careless or indifferent handling, and other quality-diminishing factors. Store training of personnel on care, handling, and refrigeration of fresh produce has been beneficial. Programs conducted by the Extension Service, State departments of agriculture, and trade representatives can all help to train handlers how to care for fresh fruits and vegetables.

I feel that each grower and handler should be working on a plan to sell his fruits or vegetables at prices that will increase his net returns over those of his nearest competitor. As long as a producer or marketing agent is aiming at the average of the market, he will never be able to sell value, because he is too busy talking and thinking about price. If the only concern the individual has is price, that is what he is going to sell.

I am convinced that the fruit and vegetable industry should make every effort to maintain quality and reduce deterioration of fruits and vegetables in the distributive process. To this end, I would include better grade standards; improved inspection techniques; more practical containers for handling, shipping and distributing the products; and more recognition of temperature, humidity, and other factors that affect quality. Attention also needs to be directed toward another area that is closely associated with quality maintenance; that is, maximum utilization of low-grade fruits and vegetables.

Representatives of public agencies need to consider how their efforts fit into the welfare of the industry as a whole. There will be little overall gain if the objective is to encourage the transfer of consumer demand from one commodity to another. Neither the income of the industry nor the efficiency of the marketing system would be increased by such activity. There is a broad gap between the ends of a specific fruit and vegetable marketing activity and the goals of the industry. It is not a proper goal to dispose of fruits and vegetables that are produced blindly by farmers without regard to the market requirements. This type of effort would have us eating, say, more apples and fewer oranges. The increased consumption of one would offset the decreased use of the other, and the costs of creating the demand would be thrown in as an additional marketing cost.

Let us analyze the market, analyze the potential for expanding consumption, form a judgment about what activities will best serve the industry and consumers, and then execute the programs we decide upon. At the same time, we should remain alert for new developments that will require new appraisals of the situation, recognizing that the results of any quality improvement program are measured by changes in demand.

CONCLUSIONS AND RECOMMENDATIONS

Work group on how outlets can be expanded through quality improvement of fruits and vegetables

The following conclusions were reached by the work group after discussion of the various phases of the topic.

1. The results of quality improvement programs being conducted by the States give convincing evidence of the importance of the quality factor in increasing outlets. For example, in one State the sales curve for an important canned fruit has gone up about 80 percent over the past 15 or 20 years due in substantial degree to stringent control over the quality of the raw product.

2. While effective quality improvement programs can be achieved through voluntary action, this approach has its limitations because of the refusal of minority groups to cooperate. Regulation of minimum quality through State law or marketing orders administered by the industry under Federal or State authority has been found necessary in several States to establish a sound basis for promotion and merchandising programs.

3. The action of a few buyers in a marketing area in shipping products of low and uncertain quality often causes a lowering in the shipping point price for the No. 1 product and interferes with orderly distribution.

4. Flagrant and widespread abuse of U. S. grade designations in the shipment of fresh fruits and vegetables is a serious problem from the standpoint of

developing programs to improve quality and increase consumer acceptance. This situation is due to a defect in Federal legislation with respect to the use of Federal grades and standards. Although there is a need for corrective action at the Federal level, the States which have not done so should take steps to prevent such abuses on shipments originating in their borders.

5. Progress is being made in improving the quality of fruits and vegetables as they leave the farm and local packing shed. State department of agriculture personnel have concentrated their activities on quality improvement at these levels in the marketing process. Up to this point, this preoccupation with problems at the harvesting and local assembly levels has been desirable in view of the critical importance of proper harvesting practices, temperature control, and care in grading and packing at these levels in determining the quality and condition of the product as it reaches the ultimate consumer. This work needs to be continued. However, since quality losses occur at late stages in the marketing process, quality improvement programs of the State departments should be expanded to encompass work with transportation agencies to improve such things as loading practices and temperature and humidity control in transit. The discussion of the matter of working with wholesalers and retailers in the area of quality maintenance was not adequate for the group to reach agreement as to how aggressively State department of agriculture personnel should move into this field.

6. To do effective work in quality improvement, people should have some background of experience in marketing, such as that of an inspector or buyer of fruits and vegetables, and should have a genuine interest in marketing work as a career. The group did not reach conclusions covering the minimum educational qualifications of workers in this field. It was agreed that, although experience was an important factor in the selection of employees, the ability of a person to get along with others and to motivate others to take action on problems was highly important.

7. Precise measurement of the results of a quality improvement program is difficult because changes over time in the physical or dollar volume of sales of a commodity usually involve a complex of factors, of which quality improvement is only one. A general idea of the effectiveness of such a program can sometimes be gained by comparing the number and types of buyers purchasing the commodity before and after the initiation of the program. Similar comparisons can be made of the frequency of rejections and price concessions at the receiving end.

GUIDEPOSTS TO FOLLOW IN ORGANIZING PROMOTIONAL PROGRAMS FOR FOOD PRODUCTS

G. Chester Freeman
Food Trades Branch
Agricultural Marketing Service, USDA

It's a real pleasure to be back with you again, and I'm flattered to be included among those regarded as qualified to speak on the subject of expanding market outlets for food products.

In the matter of techniques for developing and conducting promotional programs, I believe it is well to emphasize what has already been pointed out to us -- that there are, essentially, two different kinds of food promotion. These include the long-range consumer-education type of promotion dedicated to developing an expanding and stable market for a given commodity or commodities. This kind of program relates to the economic development of your locality, and the promotion is carried on continuously, whether or not the product is in burdensome supply.

Many States, and certain agencies in our Federal Government, work on such programs, but they are not within the province of my agency, and I would not wish to pose as a spokesman for them.

I am concerned with the other kind of promotion -- the one dealing with the movement of seasonal surpluses, or problems of supply caused by accumulations of food inventories. My discussion, therefore, will be limited to this latter type of promotion.

And I can be of most help to you, it seems to me, if I outline for you the guideposts that we follow in the U. S. Department of Agriculture in our work on a plentiful foods campaign. Here they are -- our guideposts for plentiful foods work:

1. -- Get the full story
2. -- Organizational meeting
3. -- Develop a plan of action
4. -- Launching the drive
5. -- Supporting materials
6. -- Keep the ball rolling
7. -- Documentation

Now, let's take a close look at each of these guideposts. The first is, "Get the full story."

In carrying out any assignment, it is my contention that there's nothing like knowing what you're doing. What background do you need on a commodity that needs promotional assistance? Is it necessary to know more than that a commodity is in marketing trouble and needs some help? What is there to know that is valuable in formulating a promotion?

To answer that question, I'd like to emphasize a point I've made before--the more you know about a commodity, the more you can do for it. The more you know about a product, the better you understand its peculiar marketing patterns and problems. The better you are fortified with this knowledge, the better equipped you are to get your food promotion job done. It's just as simple as that.

What kind of information does one gather about a product that needs promotion? Well, let us say that you have been asked to help out with a marketing problem on a specific commodity. The first thing to determine, I would say, is where the product is grown. How many producers are involved? Are there any producer organizations that can help with a food promotion? What are the varieties of the product, and their relative marketing importance? What are the product's uses -- is it consumed fresh, in processed form, or both? Is there an export factor? Does it have nonfood uses? What are its nutritive values? What about the history of the product? Where did it originate? How important is it to the economy? These are basic bits of information which are necessary to your full understanding of the product and its marketing problems and peculiarities. There are other things you may want to know. Statistical information, for example. Acreage, yield, average or "normal" production. Packs and carryover stocks of processed products, if any. Normal consumption and disappearance, and that sort of thing.

You'll want to know about the methods of marketing the product. Is it marketed in fresh or processed form, or both, and how is it packaged? What is the most popular size of container? You'll want to know if there are marketing studies available concerning the product. You'll want to know if there is a marketing pattern for the product -- is there regional or ethnic preference for it? This is important in planning promotional programs -- if you are pushing pinto beans, for example, you would accent your efforts in New Mexico, Arizona, Texas, and adjoining areas where this is a relatively popular food item. Lamb has a similar provincial marketing pattern. It is popular in the West and in the Northeast, less so in other parts of the country.

You would want to determine whether the commodity has a seasonal marketing pattern--important to you in the timing of your promotion.

Another important factor in this matter of backgrounding yourself on the product to be promoted is to know something of the products and industries allied with it. The reason for this is obvious, I think; it opens the door to support of the merchandising program from these groups. There's the tie-in factor, for instance. If you are promoting honey, let us say, you may look to the manufacturers of biscuit or pancake mixes for supplemental support. If you are promoting lemons, the fish industry might be counted on to join the effort. If you are pushing eggs, you lock to the bacon and ham people to coordinate their promotional activities with those for your product.

The matter of tie-ins is only one factor in the connection with allied industries. The container people often join in with food promotions. Canned products often win the support of the can manufacturers' industry, and production equipment suppliers can often be counted upon to cooperate. Trade associations also engage in promotion -- in fact, are often the spearhead of an industry promotion. You should know all about these trade groups, as well as the industry leaders associated with each product.

Well, so much for the gathering of background information. I think you can see the importance of knowing all about the product you are about to promote.

Let us consider the next phase of carrying out a promotional campaign. This is the matter of getting together with producer organizations. In our efforts in the plentiful foods program, the request for a program must always originate with a producer group. This is the first order of business. We like to feel that producer groups are willing and able to help themselves in a promotion. As I have pointed out, producer organizations often spearhead merchandising campaigns, often advertise, or develop materials and are closely alined with the trade groups handling their products. Whatever their role, they should be integrated into any campaign concerning their particular commodity.

The next step is to develop a plan of action. This, I believe, would call for meetings with major processors, distributors, and allied industry groups to outline campaign plans, review related campaigns projected or under way, consider campaign techniques, set a time for the drive, decide on slogans, and establish a theme -- in other words, finalize the plans of action.

Now we come to the stage of "launching the drive." And the foremost consideration, of course, is the people with whom you work. Here are the principal ones -- the retail and wholesale trade, processors, allied industries, information media, and --last, but far from least -- the State and local officials.

Here, we rely heavily on the work of our field staff -- men who are in close touch with all the people in an area who can help a plentiful foods campaign. Our program of trade calls by our field staff is based on the belief that you still can't beat the personal contact approach for getting things done. The personal contact is the most effective means to inform, persuade, encourage, and inspire. Any State-developed promotion, I would think, should not overlook the importance of this phase of food promotion.

Our field contact force, of course, has another important function -- that of coordinating the efforts of local producer and trade groups. Whether the campaign originates at a State level or national level, the ultimate job will be done on a local basis -- and will function as a local, community activity. The consumers, after all, live in communities.

These personal calls are supported with a collection of materials -- the exact lineup of materials, of course, depending on intensity of the drive and similar factors. One of these supporting materials is the fact sheet -- we issue one directed to the grocery trade, another to public and institutional feeders. Another supporter is the so-called "alert" letter to key industry leaders and outlets --telling them about the promotion, and urging their support.

Now we come to another phase of commodity campaigns -- the informational phase. The matter of alerting the consumer is not limited to in-store merchandising campaigns alone. A food in very heavy supply is news, and the various news media all want news -- whether a trade journal, a weekly or daily newspaper, a magazine, radio, or TV. This news can take manifold forms -- simply news announcements, feature stories on suggested uses -- menu and recipe recommendations. It can be in the form of pictures, radio presentations, and TV demonstrations. Synchronizing the release of this information with the timing of the promotion is very important, and yields big results. This kind of information operates in the public service area. We do not advertise, buy radio or TV time; we rely on the news and feature value of our releases to interest the media -- indeed, we provide a real service to them, provided our information is factual and honestly presented, and of general interest. The press will use special stories and pictures, radio stations will use scripts, and TV stations will make use of slides, short films, and demonstrations -- provided we SERVE these organizations -- and not USE them. This, I feel, is most important. On the matter of information activities, I think it is well to stress that these, too, have a national or State aspect and a local aspect. Our area information people fulfill this function, working with the local media.

As part of this activity, we sometimes help to plan a model merchandising activity for the commodity being pushed. Sometimes, for example, we help a food store operator to set up a display that's a model of good merchandising practice. Then we report how he did it, and what results it produced.

A similar procedure is followed for the food service industry -- where, again, we stage a model of good merchandising. In this, we're very fortunate in having an excellent cafeteria system in our buildings in Washington, and therefore we're able to closely observe the activity and report on its results.

In both cases, we spread the word widely to those interested -- through the proper segments of the trade press. Our experience is that these how-to-do-it stories are highly effective as a means of persuading food distributors to do a better job of merchandising, thus to move more of the product.

Good campaigns depend on good development. But they depend, too, on the plans being effectively put into operation -- and kept operating. We depend on teamwork, between the manpower that industry can devote to the campaign, and the manpower we can give it. Thus, we raise a problem of communications-- and good communications are vital. We make a special point to keep all of our field staff advised of what industry is doing. Similarly, we make a point of keeping the industry's representatives fully advised of what our men are doing. And we encourage them, on the local level, to get together, compare notes, and make cooperative plans to fit local situations. Out of that sort of relationship, we pull closely together in harness, and the total effect that we achieve is heightened tremendously.

That leads us to another important factor -- the factor of documentation. Reports on a campaign really shouldn't be necessary, because in themselves they would seem to contribute nothing to the success of the campaign. But campaigns are run by people -- and you've got to consider the people as well as the commodities to build the best possible campaign. Interim reports serve a variety of purposes, all good ones. They help to keep all the members of your team informed of what's going on. They help to keep administrators advised of what's been done, and how manpower is being used. But, most important, they help get the snowball of enthusiasm rolling among your team members. When your workers have a chance to look beyond their own immediate tasks, to get the big picture of what's being done, they're better informed, the spark of competition is felt, and the total effect of your total team shows it.

Those, then, are our guideposts for a plentiful foods campaign. Since they are benchmarks, we don't use all of them all of the time. But we do consider all of them,in every campaign. And I hope that my outline of these guideposts will prove helpful to you in your consideration of the techniques for developing and conducting a program for expanding market outlets.

EFFECTIVENESS OF A FARMER-RETAILER COMMITTEE IN ORGANIZING PROMOTIONAL PROGRAMS

R. B. Wilson
Agricultural Economics Department, Purdue University

Promotional programs have been conducted during the past three years by the Indiana Farmer-Retailer Committee, in cooperation with Purdue University. Many different agricultural food commodities have been promoted, some of them several times. How effective has this committee been in organizing these promotional programs? Before we discuss that, what is the Farmer-Retailer Committee, who is on it, just what does it do, and how?

What is the Indiana Farmer-Retailer Committee?

It is a unique group of agricultural leaders in food production, distribution, and education. It has 22 members who are leaders in such groups as the Indiana State Poultry Association, the Indiana Canners Association, the Indiana Dairy Products Association, the Indiana Restaurant Association, the Indiana Chain Store Council, the Indiana Farm Bureau, the Kroger Company, and the Great. A&P Tea Company. It has been in existence for over 3 years and is helping expand outlets by conducting promotional programs for plentiful commodities, distributing market information to the trade and consumers, and encouraging production and marketing of better commodities.

What It Has Done

This committee has sponsored a Marketing Clinic for Management Personnel, at Purdue University; encouraged an expanded consumer food marketing program in Indiana; conducted informational and promotional campaigns for plentiful commodities and helped get legislation passed which provides for an Indiana Seal of Quality. This discussion will be limited to the last 2 items.

One of the activities of this committee has been to get an integrated promotional program behind commodities that are in plentiful supply. Campaigns were undertaken during the past year for cottage cheese, tomato juice, canned sweet corn, and apples.

The Farmer-Retailer Committee decides what to promote and when. Industries anticipating marketing difficulty due to large supply requested assistance from the Farmer-Retailer Committee. If, in the opinion of the committee, promotional help was needed, assistance was then given. It has been the policy of the committee to assist only when a commodity has been in plentiful supply. After approval was given, the campaign was planned with the industry group concerned. Dates for an intensified promotional campaign were established. Cooperation of Purdue University Departments and Extension specialists was obtained. News stories and radio tapes were prepared and given statewide distribution through the Purdue Information Service. The radio tapes telling of the supply situation and the merits of the product concerned were prepared and sent to 19 home agents and radio stations. Similar information was prepared as news stories and sent to 9 radio and television stations, 47 newspapers, 77 home demonstration agents, and 8 out-of-State sources.

Individual notices were sent to newspaper, radio and television representatives and, at times, "kick-off" dinners were given for newspaper food editors, radio and television directors, and home economists. Wide use was made of material from industry sources such as the Poultry and Egg National Board and the National Livestock and Meat Board. Independent and chain grocers, restaurant operators, and plant and institutional feeders were alerted by special mailings from the Farmer-Retailer Committee, as were county agents, home demonstration agents, and consumer agents.

The industry requesting assistance participates in the campaign and distributes material. It is usually responsible for alerting its members and for preparing promotional material. In the case of the tomato juice promotion, table tents were prepared by the Canners Association and distributed by the Indiana Restaurant Association, both of which are members of the Farmer-Retailer Committee. Retailers, through their associations, are also members of the Farmer-Retailer Committee and provide valuable assistance by featuring the commodity in special sales. Information concerning the promotion program is also distributed to such publications as the Hoosier Farmer and the Indiana Food Merchant, who feature the commodities.

By getting industry support through dinners for information specialists in major areas in Indiana, we have been able to obtain a personal acquaintance with many of the mass media specialists. Because we asked their assistance only when it was needed, cooperation has been excellent. Many of the key organizations around the State are represented on the Indiana Farmer-Retailer Committee and have been very willing to cooperate. The Indiana Restaurant Association and the Independent Grocers have both addressed envelopes and made mailings to their members concerning the campaigns.

New Quality Program Being Developed

It has been the feeling of members of the Farmer-Retailer Committee that more should be done than promoting commodities that are in plentiful supply. They felt that, to effectively promote a product, it should be a quality product that can be differentiated and advertised. Legislation was drafted by the Farmer-Retailer Committee establishing an Indiana Seal of Quality for top-quality agricultural food products. This was submitted to the legislature and passed as House Act #297. This program is expected to provide a new look in marketing by supplying the products wanted by the trade and consumers, identifying them with a distinctive seal, and telling people about them. It is hoped this program will help expand the demand for several Indiana agricultural food products by giving the trade and consumers the "cream of the crop," identified by a distinctive seal.

It provides:

1. An Indiana Seal to identify the products.
2. A voluntary program--anyone meeting standards established for use of the seal will be granted permission to put it on his products either as a separate seal or as part of his label.
3. Inspection and enforcement--products must be inspected and approved before they can be sold under the quality program.
4. An informational and educational program to tell producers and handlers about the Seal of Quality Program and the value of the products carrying the seal. This is being conducted at Purdue University in cooperation with industry groups.
5. Administration at Purdue University by the Director of the Agricultural Experiment Station.
6. A statewide advisory commission appointed by the Commissioner of Agriculture to assist the Director in administration of the program. Commission members represent fruit, poultry, livestock, dairy, canners, packers, independent grocers, chain grocers, farm organizations, vegetable growers, and Purdue University.

The watermelon industry was the first to take advantage of this program and used it on a small portion of their crop in 1957. The egg industry will be the next group offered an opportunity to take advantage of this program. It is being submitted to the industry in November 1957 and steps may then be taken to implement the program. Committees are at work to explore possible adoption of the program for meat, broilers, apples and peaches.

Has the Committee Been Effective in Organizing Promotional Programs?

Although the Seal of Quality Program is basically a program to get quality products, it is also a promotional program and the effectiveness of the Farmer-Retailer Committee in organizing this promotional program is shown by the fact that it drafted the legislation and helped steer it through the general assembly. Members of the committee testified in Senate and House hearings and explained the bill to key legislators. Whether the committee will be successful in further promoting this program depends not only on the activities of the committee but on the industries concerned.

The committee has been effective in organizing the informational and educational campaigns to move commodities in plentiful supply. This is apparent from the cooperation that has been obtained from industry members, Purdue specialists, and newspaper, radio and television specialists. The only direct cost has been that of a Purdue University project. Under this project, a Purdue staff member serves as Executive Secretary of the Farmer-Retailer Committee and helps coordinate its activities. Wide coverage has been obtained at a small direct cost.

Effectiveness of the promotional programs in moving plentiful commodities is extremely difficult to measure. Continued requests for assistance may be one indication of effectiveness. Wide coverage obtained with the informational and educational material of one of these promotions may be another indication. The large amount of material distributed may be still another. However, it is extremely difficult to measure direct effects of the promotions. Purdue University conducted a study on the cottage cheese promotion undertaken in 1957. In this promotion, conducted during the Lenten season, display materials were prepared by a committee representing the Indiana Milk Dealers Association, the Indiana Chain Store Council, and the Independent Grocers Association. Assistance was given by the American Dairy Association. The Farmer-Retailer Committee also gave assistance. Materials consisted of packets of window banners, shelf talkers, dairy case cards, and streamers. The Purdue summary does not conclusively show that the cottage cheese promotional campaign was justified. Neither does it show that it was not worth the effort. However, there is evidence that intensive promotional campaigns usually result in increased sales.

The question of whether the cottage cheese promotion efforts were justified in terms of increased sales is not necessarily the only important one. How such a campaign could be made more effective is also important. Considerable experience was gained this year. Cooperation between grocers and dairy industries has been established. A joint effort can be mutually valuable to each, and this cooperation is essential to fully realize the objective of increasing sales.

In summary, it is concluded that the Farmer-Retailer Committee has been quite effective in organizing promotional programs and in serving as a clearing house of ideas for diverse groups with a common thread of self interest. It has also been able to work out some projects that couldn't have been accomplished individually by the members of the committee.

Future success of the committee depends on whether it continues to fulfill a need. It probably can't survive on promotional programs alone unless regular financing and fulltime help is obtained. However, it can serve as a guiding, cohesive force in Indiana agricultural marketing.

CONCLUSIONS AND RECOMMENDATIONS

Work group on techniques of developing and conducting a program for expanding market outlets for fruits and vegetables

Representatives from 23 States discussed the various phases of developing and conducting commodity promotional programs in the States as well as on a national level. In discussing the various aspects of State-sponsored and nationally sponsored promotional programs, it was pointed out to the group that each State has a job to do on its own products within its own borders, at the same time the State should be in a position to cooperate with other States on a national program. It was generally agreed that information specialists within the State department of agriculture are necessary and vital to conduct State commodity promotional programs. Continuing along this line, it was concluded that experienced information specialists or sales and advertising personnel should handle the expenditure of funds for advertising in connection with promotional programs.

It was brought out that assistance is available to the States through the Food Trades Branch of the Department to assist them in organizing and conducting their promotional programs. The value of tie-in advertising of agricultural commodities with other commodities is an economical as well as an effective means of promoting the product for small fruit and vegetable groups.

The subject of enabling legislation for the assessment of growers and other marketing groups to provide funds for promotional campaigns was discussed at some length with various representatives reporting on the mechanics of operating the program in their States. It was recommended that States which do not now have such enabling legislation should look into this possibility, as it is a most effective means for obtaining adequate funds for conducting promotional programs.

The effectiveness of a farmer and retailer committee in organizing commodity promotional programs, backed by State legislation, was discussed at some length by one of the speakers. He pointed out that quality is the keystone to carrying out any commodity promotion program. The importance of having the growers and marketing groups work together in a coordinated campaign to sell the product was also emphasized.

It was agreed by those present that it was most difficult to evaluate the results of a promotion program, and it is evident that much remains to be done in determining the proper criteria or benchmarks for measuring the value of these programs.

It is apparent from the discussion by this work group that promotional programs are a vital part of the State department of agriculture's activities and will receive increased attention on the part of many State departments in the future.

DAIRY PRODUCTS, LIVESTOCK, POULTRY AND EGGS

Work Group Sessions

EFFECTIVENESS OF THE KANSAS EGG QUALITY IMPROVEMENT PROGRAM IN PROMOTING KANSAS EGGS

Winzer J. Petr
Kansas State Board of Agriculture

It is indeed a pleasure for me to have this opportunity to visit with you a few minutes this morning on the progress being made in promoting Kansas eggs through a quality improvement program. This is the third of these workshops that I have had the privilege of attending and I only hope that I may contribute to the workshop somewhere near proportionately to what I have been able to take away during the last two years' sessions. These workshops are a fine thing and provide an excellent opportunity for the various States to get together and see what others are doing and as a result expand and strengthen the programs now being carried out in the respective States.

It is somewhat difficult to discuss a topic such as has been assigned to me without mentioning many of the things contributing to the overall quality improvement program in Kansas. As I go along, I will at least touch on many things that have contributed to the program, with the thought in mind that some of you may be undergoing stages similar to those that we went through some years back.

In order to lay a little groundwork and show you the problem that we were faced with, I would like to go back to the year 1952 when our active egg quality improvement program began on a continuing basis. At that time, we had a system of marketing eggs very similar to what many of you have experienced or are yet experiencing, in that there prevailed, as had been true for many years, a so-called "Current Receipt" market. By this I mean that the major volume of eggs moving from the farm to the first buyer was purchased on a straight-run basis, and the producer who was quality-conscious and tried to market a quality product received no incentive whatsoever over the producer who had no pride in his production practices and was marketing a marginal or submarginal product.

Kansas at that time was quite important in the production of eggs, ranking 12th in the Nation, but had historically been pretty well to the bottom of the ladder as far as the prices received by producers was concerned. Then, too, if you will recall, at that time cattle prices were high, wheat farmers were harvesting record yields and selling at well supported prices, the dairy industry was flourishing, and hogs were having their ups and downs following a pattern so characteristic of that industry over many years. Lacking incentive for the production of quality in the marketing channel, producers in general were somewhat prone to discount egg production and devoted most of their time to the production of other commodities which showed a much higher return per dollar invested.

In the fall of 1952 and the spring of 1953, many meetings were held with producers, egg buyers, and retail concerns in an attempt to get them interested in some type of quality improvement program whereby the producer might be paid on the basis of the quality that he delivered, and that same quality be properly identified and passed on to the consuming public at a competitive price. These meetings were held with small groups and often individuals. Since there wasn't an acute interest on the part of producers, marketing agencies saw no particular reason why they should get excited, and retail grocers had been selling "Fresh Country Eggs" for a good many years, using them during certain seasons as a leader into their stores. Consequently, they failed to generate much interest in a quality improvement program at that time. It is rather amusing in that the often heard comment was, "It's a mighty fine idea, but I don't think it will work."

Being somewhat of a stubborn nature (at least that's what my wife tells me) and fortified with the fact that the egg industry to Kansas meant a yearly income of somewhere around 80 million dollars, and with the basic knowledge that consumers in general did want a quality labeled product and were willing to pay for it, we bowed our necks a little, rolled up our sleeves, filled the car with gas and went to work.

Since there was no basic legislation for the buying and selling of eggs, we approached the whole idea from a voluntary standpoint and initiated and developed a grading and labeling program. A State label for the various grades and sizes was designed, official State standards were established, and we set out to sell the program to the egg industry. It wasn't easy. The first 6 months, only 3 firms cooperated in the program. The following year, word got around and additional firms became interested. We still weren't able, however, to get down to the very root of the entire problem and unite the hatcheries, the feed industry, the egg industry, and the retail grocery people into a well organized, unified program.

In the spring of 1954, a few grading schools were tried over the State, and we were much encouraged by the way they were received. In fact, by this time the agricultural economy had slipped somewhat and farm people in general were looking around for ways and means that they might increase the return from their farms. During the latter half of 1954, a great deal of interest was generated and the various segments of the poultry industry began pulling together. They all felt that the basic idea of a voluntary program was good and was sound, but perhaps was a little too slow and would take many years to develop.

During late 1954 and early 1955 a bill was drawn up to present to the State legislature in the hopes of enacting an egg grading law. Two previous attempts had been made without success. During the 1955 session of the legislature, however, farm organizations, feed companies, hatchery people and egg buyers in the entire industry took part in the formulation and were successful in getting the present law enacted.

Very briefly and in just as few words as possible, the Kansas Egg Law provides that only B quality or better eggs, properly labeled, can be sold at the retail level; it requires that all eggs for human consumption be maintained at a temperature of 60 degrees Fahrenheit or less after being received at the point of first purchase; and it exempts the producer when selling only eggs of his own flock production.

Financing of the bill is rather unique in that a 2-mill-per-dozen levy is assessed on all eggs sold to food purveyors or consumers. This means that a firm selling 10,000 cases of eggs at the retail level pays its fair share of the administrative cost, and a firm selling 1 case of eggs at the retail level pays its fair share. In other words, the financing is fair and equitable. The legislature made two provisions for paying the fee: (1) The person or firm could purchase inspection fee stamps which also serve as a grade label, or (2) he can register and secure a permit and permit number to report and pay the inspection fee on a quarterly basis.

It was up to us then as the administering agency to provide the inspection fee stamps. These had to be designed and printed so that they would be available in plenty of time. Since there are 6 sizes and 4 qualities of eggs permitted for sale in Kansas, it meant that we had to maintain inventory of 24 denominations of carton stamps, plus the half case and the case stamps. All in all, we inventory 30 denominations of inspection fee stamps.

As some of you already know and others of you might suspect, this brought on a whole host of problems as far as our department was concerned. The bill was actually passed in March of 1955, and became effective on July 1, 1955. This gave us approximately 3 months to lay a tremendous amount of groundwork which we knew was essential to getting the program off to a good start. More grading schools had to be conducted, people had to be informed of the provisions of the law, regulations had to be drawn up, personnel had to be hired, and the general mechanics of administering the law had to be formulated.

Needless to say, we were a busy bunch of people during those three months. Twenty-five information meetings were held throughout the State to inform the people of what the law was. Grading schools were conducted over the State in order that anyone who wanted to attend one of these could do so without having to drive too great a distance. Office techniques and procedures were developed, civil service examinations were given for prospective employees, and literally hundreds of pieces of correspondence were handled during this period.

Prior to this time, the agreement for Federal-State grading service in the State of Kansas was with the Kansas Poultry Industry Council, which, as far as we knew, no longer existed. Consequently, the Poultry Division, USDA, approached us as to the feasibility of their entering into an agreement with our division for the official Federal-State inspection of eggs within the State.

Rather than the Federal people promoting one grading program and we on the State level promoting a separate grading program, we decided to combine our efforts into one overall grading program and entered into an agreement with the USDA for this purpose. The State supervisor is now housed in our division office and the entire grading program is being coordinated and promoted through one office. For all practical purposes, we feel that this is quite a satisfactory arrangement and we have sufficient volume that the agreement has, up to this time, paid its own way.

As this intensified grading program began to gain momentum, marketing agencies became increasingly aware of the inadequacy of their plant facilities. This led to an increased demand on our division for technical assistance in improving old, and planning new, egg handling facilities. This phase of our market service work has been very gratifying and has proved very effective from the standpoint of increased efficiency and reduced handling costs. We have now assisted in planning 10 or 12 plants over the State, and the work continues with special emphasis, of late, on the planning of egg breaking rooms.

During the summer of 1956, we joined hands with the State Extension Service, the Kansas Poultry Improvement Association, the Kansas Farm Bureau and other interested groups in helping to sponsor a series of 10 egg quality meetings over the State. Meetings were set up from a geographical standpoint in order that each meeting might cover from 5 to 6 counties. The idea of the meetings was to try to get the people out, entertain them a little while they were there, and also expose them to some of the things we felt that they should be exposed to in furthering a quality egg program.

Meetings in general started at 10:00 a.m. and lasted until 3:00 p.m. A barbecued chicken dinner was served at cost. A market egg show was held in connection with each of the meetings, with the show divided into three classes, white eggs, brown eggs, and miscellaneous eggs. Local industry groups furnished ribbons and premiums for the egg show and also contributed labor for putting on the barbecue at noon. Since there was considerable interest in cage layer production in the State about this time, the afternoon program consisted of a panel discussion of "Cage Layers versus Floor Layers." All in all, the meetings proved tremendously interesting and popular, as evidenced by the attendance at the meetings. Attendance varied from 250 to 1,150 people at each of these meetings. It proved so successful that 14 additional meetings are being planned for this coming year with emphasis on marketing of eggs.

Then, too, as many of you are aware, Kansas is the incubator or proving ground for a cage layer program that is being promoted by some of the feed interests in the Midwest. We are still hearing pros and cons on cage layer production, and probably will continue to hear comments for years to come. The general consensus is that cage layers and floor housing are two separate systems of producing eggs and that either of them can be equally successful or disastrous, whichever the case may be.

Up till this time, I have been rather general in my comments and, of course, I've only hit the high spots because of the limited time we have for discussion here today. However, I would be derelict to my duty if I didn't at least attempt to draw some conclusions or results that have been obtained from the quality egg program that has been developed in Kansas. Of course, we are always sticking our necks out a little when we draw conclusions or results, in that oftentimes we do not have basic data to go along with our conclusions, but I think some definite patterns have been established as a result of the quality program that I would like to pass on to you at this time:

1. The average quality of eggs being produced by Kansas farmers is definitely improved. In visiting with producers, buyers, retailers, etc., we have found almost unanimous agreement that there has been a very definite improvement in the overall quality. Producers are more quality conscious, there are more egg cooling facilities on farms, and more eggs are being sold by producers on a quality basis than ever before. Buyers report that, due to the temperature requirement, loss or inedible eggs have been materially reduced. In fact, many report that about the only inedible eggs they have are those with blood and meat spots, and, of course, as far as anyone has been able to find out, there is no remedy for these at the present time.

2. Most any egg producer who really wants to may now sell eggs on a quality or graded basis. There may be a few isolated exceptions to this, but, generally speaking, a graded market is available to most areas in Kansas.

3. Many producers have a direct market into retail channels on a graded basis (that is, the producer doing the candling and grading) that, prior to 1955, was not available. Most of this, of course, is near the larger towns, but accounts for a considerable volume when you consider that Wichita, Kansas City, and Topeka consume one-fourth of all the eggs that are consumed in Kansas.

4. Consumers are receiving higher quality eggs and the eggs come closer to meeting the standards for labeled grade than ever before. Our fieldmen who are administering the Kansas Egg Law report that, although there is still considerable room for improvement, the quality they are checking now, compared to two years ago, is materially improved.

5. Other States buying eggs from Kansas dealers report definite improvement in quality during the past 2 years. I will say, however, that we haven't made as much progress with out-of-State shipments as we would like to have made because many of our people shipping eggs from Kansas to other States have in the past, been more interested in volume than quality, and it is difficult to get them to change this pattern of operation. Recent egg legislation developed in some of the States in which we market eggs will go a long way toward requiring improvement of eggs being shipped from Kansas.

I want to thank you folks for your interest in being here this morning and I realize that I have done a lot of talking, most of it in general terms. But I'm hoping that we will have a discussion period and if any of you have any questions, please feel free to ask them.

I do have with me and would like to show you at this time a 10-minute colored movie that we made in our department, entitled "Marketing Quality Eggs." This movie, incidentally, was made as part of our market service program and was filmed and narrated by our own people of our own industry. We have 4 copies of this film and would be very happy to make it available to any of you who think that it might meet a need in your State. It will be made available to you free of charge, except that we would expect you to pay the return postage on the film. Any of you who are interested may have it scheduled by writing the Marketing Division, State Office Building, in Topeka, Kansas. We would appreciate your giving a 1st, 2nd, and 3rd choice on dates, and we will do our very best to comply with your requests.

IMPORTANCE OF QUALITY IN INCREASING SALES OF DAIRY PRODUCTS

Brace Rowley
Kansas State Board of Agriculture

The assignment of this topic, "Importance of Quality in Increasing Sales of Dairy Products," has been an awakening to me. Many times, in appearing before the dairy industry, I have stressed the importance of quality improvement of our dairy products by stating that if a food product is not good, we cannot expect it to compete with the 5,000 other food items on the market, which are competing for the housewife's food dollar. I have cited the example of the inroad made by margarines on butter sales, which have been in many cases due to the consumer's buying a bad piece of butter rather than entirely to the price factors.

In other words, I have talked in a general sense about quality improvement, but have not tied down the importance of quality to a definite dollar-and-cent value or stated specific examples of how sales volume has increased due to quality improvement. This is the situation in which I found myself, so I went to the various segments of our own State dairy industry and started asking some questions: Can you tell me of specific cases where the quality improvement that you have made in your dairy products has opened up a new market for your firm: Can you give me examples of where quality improvement has increased your volume of sales in established markets? Can you cite me specific examples of how quality improvement has increased the dollar-and-cent sales value of your dairy product?

This morning I want to tell you about some of the things I found out from talking with our Kansas industry men. First, let's talk about a co-op manager who manages a business having milk receipts of 15 million pounds of Grade A and 45 million pounds of Grade C, plus the operation of a creamery. About 9 years ago, in his search for new and better markets for his patrons' milk, he learned of a large national ice cream company operating out-of-State that was in need of sweet cream and condensed milk solids. Their quality standards were very high. The manager said that his quality standards at the time would not meet the requirements of this firm. They went to work on the milk quality and soon found they could meet the established standards. The sales to this concern started out on a small scale, but over the years they have increased as quality improvement advanced, until today this account provides a half-million-dollar income to the co-op.

In addition to this market, another market was developed in-State in the last 5 years that has added another half-million income to this plant. The manager pointed out to me that the sale of sweet cream and condensed milk solids to these 2 markets has meant an increased return of 5 to 7 cents per pound of butterfat on the sweet cream, over churning this in his creamery, and a saving of 3 cents per pound over powdering of the milk. This is a good example of how quality has increased the sales value of the products, as well as how it has opened up a new market for this local co-op.

An operator of one of the top-quality cheese producing plants in our State has worked with his producers in developing a higher quality of raw milk supply by conducting regular sediment checks, by use of the methylene blue test, and by the use of mechanical coolers. He told me that he markets his cheese locally and in the Los Angeles area. He has consistently received 4 to 5 cents over competitors in the local area and has sold 75 percent of the longhorn cheese in the area serviced by his trucks. The Fleming Food Company, a large food distributing chain in our State, has recently contracted for cheese from this plant. Fleming's stated that he had never paid more than 3/4 cent under the Plymouth Board Market, but the contract with this cheese plant was made for 1 cent over the board market price for longhorns and 2 cents for rindless horns. In negotiating the contract, the procurement officer stated that he knew that the manager received more for his cheese, but frankly admitted that it was worth more. In commenting on his Los Angeles market, the manager said that some of his buyers have told him that they handle some Wisconsin cheese, but that they sell more of his cheese than the Wisconsin cheese. This is not a discredit to the Wisconsin cheese industry, because they have done an outstanding job of producing quality cheese and marketing it nationwide, but instead it is a credit to what a quality program can do in the sale of cheese.

In discussing cream quality, the chairman of our Kansas Cream Quality Committee told me that in Kansas 15 years ago, 35 to 40 percent of farm-separated cream produced during the summer made 89-score butter. Today in Kansas. the production of 89-score butter has dropped to 10 percent or less, and in the not too distant future it will disappear completely, in the opinion of this butter man.

The manager of a nationwide company that processes butter in our State told me that his company's operating people, who check cream all over the United States, advised him that Kansas sour cream is the best in their entire territory. The butter from this Kansas plant is sold in the resort areas of San Juan, Puerto Rico, and Honolulu. They have sales in Phoenix, Tucson, and Albuquerque. The manager stated that in Phoenix, they sell in competition with so-called 92-score butter and their sales have constantly increased. He also stated that they have not had a complaint on butter quality in recent years, and that it is entirely different than it used to be.

One of our old-line creameries that has branched out into the processing of several lines of manufactured products had this to say about the quality factor as it concerns ice cream and sales: "Our volume of sales of ice cream has increased about 20 percent since 1950 and we think that improvement in quality during this period is largely responsible for this increase." Quality improvement has involved three factors with this concern: (1) Quality from a sanitation standpoint, (2) nutritional quality, and (3) sound processing methods. These insure against defects of body, texture, and flavor, which are most important to the consuming public.

In measuring the dollar-and-cent increase in value of the ice cream products, he stated, you have to view this on the basis of increased sales volume, because ice cream has been a highly competitive food item on the retailer's shelf.

After visiting with several other dairy industry people, I was concerned that many of them did not know just how much quality improvement had aided them in securing new markets or increasing present markets, or if the quality had increased the dollar-and-cent value of their products. I found that many of these managers were thinking that they had to maintain quality just to keep their present market. They were not thinking along the line that improved quality can be an asset to them in enlarging their market.

It has long been a habit with many of us that if we buy something from a distant market, we think it better than purchasing the same item being produced right in our own backyard. Apparently, that is the thinking of much of our dairy industry, because I find that many of our Kansas dairy concerns are selling their top-quality products to out-of-State markets. They sell on the local market only the products that do not grade out as top quality. I believe it is high time that we start awakening our industry people to the potential of good local markets.

I am looking forward to finding some of the answers in the workshop discussion that follows, because I know that many of the men in this room have had many more years of work with the dairy industry than I have had. If any of the remarks that I have made this morning have been of value, I am happy that I could be here to tell you about conditions in Kansas. I will now turn you back to our chairman, so that all of us here can profit from the discussion period.

CONCLUSIONS AND RECOMMENDATIONS

Work group on how outlets can be expanded through quality improvement work on dairy products

The following conclusions were reached by the work group after an informal and open discussion of the various facets of the above topic:

1. Unless a product is of good quality, it cannot successfully compete in a market except at a lower price. It is essential to establish a uniform quality to command consumer preference. Standards are necessary in establishing uniformity. In one instance, a dairy meeting a high quality standard was able to sell its product to a marketing agency under an established national brand and thus increase its sales. The attainment of high quality begins at the producer level.

2. Voluntary marketing programs, with some incentive or reward for high quality, are most desirable, but compulsory programs are sometimes necessary to control the few who may hinder the progress of the majority who are desirous of maintaining a quality program.

3. There is a need to consider the value of the home market by selling high-quality products there as well as in outside markets. Do not ship all good products out of the local market and try to sell the low-quality products at home.

4. There is a need for measuring the market situation specifically, if possible, before activating a marketing program, in order to be able to measure the success being achieved at any particular time in the future.

5. It is sometimes difficult to specifically measure results of some programs, but they can be measured by:

   (a) Testimony of individuals and groups who are benefited.
   (b) The number of members of industry who are willing to continue to share the cost of administering programs. This will be done only when results are attained.
   (c) The number of interested parties who will support results which they can see.
   (d) Results can be measured, as in one State administering

a dairy products quality program, by (1) measuring the amount of sanitizing agents sold before and after the program was in operation; (2) the reduced amount of rejected milk, leaving more milk available for sales, and the increased dollar value returned to the producers. Another State reported a high volume of top-quality cheese and another no longer manufactures sour cream butter in their State. Another State reported a 13 percent increase in fluid milk sales in a large eastern city, and reported that quality improvement was a large contributing factor. This increase was significantly above the percentage of population increase.

(e) State statisticians can aid in making surveys and obtaining data vital to measuring results of various programs by combining and gathering information, thus reducing costs.

6. Availability of product is very valuable in increasing sales. In one State, the school lunch program increased the sale of half-pints of milk in schools from approximately 7 million in 1943 to approximately 119 million in the 1956-57 school year.

7. There is a need for well qualified personnel to administer various marketing programs within the States. A program should not be activated unless the leadership is trained. It is better to delay a program than to attempt it with unqualified personnel.

8. A stable market over an extended period of time is conducive to improved quality and increased sales.

CONCLUSIONS AND RECOMMENDATIONS

Work group on how outlets can be expanded through quality improvement of poultry and eggs

Successful State programs employed to expand outlets for eggs and poultry through quality improvement include voluntary and compulsory inspection and grading programs.

It was the general opinion that while a voluntary program was desirable, it was less effective than a compulsory program and slower in producing benefits to industry. Both types of programs utilize State grade labeling as a means of product identification and as a convenient means of collecting a fee for defraying inspection expense. Generally, such programs include standards of quality and grades equivalent to the U. S. Department of Agriculture standards, and operate in cooperation with the State department grading programs.

The personnel used for administering such programs prove to be more effective in obtaining industry cooperation if they have had practical commercial experience in the commodity. The effectiveness of such personnel is also in direct proportion with the training provided to industry graders and effective dissemination of program information furnished to producers, processors, and consumer groups through producers' and processors' meetings and contests, tactful inspection contacts with industry, and general television, radio, newspaper, and other literature publicity.

Accurate measurement of progress in expansion of outlets was considered difficult to achieve, although a study of the movement of graded products into and out of a State in relation to State production would give a ready indication as to the direction in which a program of improvement in quality was headed. Several States indicated measurable success in favorable comments on exports from authorities administering similar programs in adjoining States. Concern was expressed over the problems that the following conditions are developing:

1. State barriers that are set up in laws that require the State of origin to appear in grade label indentification.

2. Inequities between States in payment of inspection fees for interstate shipment.

3. Insufficient emphasis by industry on adequate producer quality control programs.

4. Inadequate retailer and consumer information programs on quality recognition and maintenace.

Recommendations for consideration:

1. All States should work toward uniform standards of quality and grades based on USDA standards.

2. States requiring State-of-origin or similar information to appear on grade labels should work toward eliminating the requirement.

3. A reciprocal inspection fee structure between States might be developed that would require the packer in the State of origin to pay inspection fees to the destination State, without requiring compulsory labeling as to State of origin in grade label.

4. Industry might be encouraged to develop more comprehensive and effective producer quality control programs.

5. Uniform and effective inspection of product at retail level should be encouraged.

6. Development and dissemination of consumer information on product quality and care should be encouraged.

HOW THE AMERICAN DAIRY ASSOCIATION CAN ASSIST STATE DEPARTMENTS OF AGRICULTURE IN PROMOTING DAIRY PRODUCTS

Shelby A. Robert, Jr.
American Dairy Association
Chicago, Ill.

When I first saw the topic for our discussion this morning, I thought that really we would not have to seriously discuss this question. My mind ran in this train for two reasons. First, the American Dairy Association is entirely a producers organization, all of our funds come from the man who milks the cows --the dairy farmer--he is our boss. Your bosses are the producers or farmers in your States; therefore, our bosses are the same people. Secondly, the purpose of your activities in promotion are exclusively to expand consumption of agricultural commodities. The purpose of the American Dairy Association's activities in the promotion field are to expand consumption of dairy products; therefore our purposes are the same; so if our purposes are the same and our bosses are the same, I know that we should be working closely together, as we are in many localities.

After thinking a little more in detail about this subject, however, I felt that there was a real need to describe some of the ways in which we can assist you in your activities in the promotion field and to let you know something of how we go about designing and developing our promotional activities.

Dairying has changed in many ways in the last few years. Technological advances in production of milk through feeding, breeding, and handling practices have increased our ability to produce milk in larger volumes and more efficiently. But changes in the production side have not been the only changes in the dairy business in the last few years. The dairy farmer has changed his concepts of his role in marketing.

Last year we undertook a study to find out how the dairy farmer looked at his business. From the viewpoint of marketing, we found, just in summary, these things:

(1) Dairymen think and act like businessmen, most dairymen look upon their operations with a very careful business attitude.

(2) Dairymen believe that they can improve their own business situation through constant efforts to increase their productive efficiency, but in addition, most of them--87 percent, as a matter of fact--feel that sales promotion efforts hold forth great opportunities for market improvement. Seventy-eight percent of the dairymen assume some personal responsibility for at least a part of this sales promotion effort.

(3) We obtained adequate indications that dairy farmers no longer believe that their job is finished when the product leaves the farm. They recognize the necessity for being interested in marketing, including sales promotion efforts designed to expand the markets for their products.

This means that we all have a responsibility to assist the producer in designing programs which will assist him in developing better markets, more new markets, and expanding markets for his products.

The American Dairy Association is now operating an advertising and merchandising program which is planned at least a year in advance with the kinds of variations that will fit in with local market needs. We have a complete program of development of merchandising materials that can be used in retail stores and restaurants and on back door steps for calling attention of the consumer to the advantages of using dairy products. We have a mat service providing materials for ad inserts of all kinds. We have a rather complete food editor service and provide other home service needs. We provide public relations aids for the dairy industry and we have the backing of a research program to assist in planning promotion activities.

All of these programs are available for adaptation in local market areas. The merchandising materials are available for you to use in some of your promotional activities in merchandising dairy products. The public relations and the home service materials are available for your use in your programs in the States. I know that most of you know and work closely with the State managers in your States. The American Dairy Association is now operating in approximately 45 States, and managers are available in most of those States. I know that they will be glad to work with you in developing dairy product promotions such as are carried out cooperatively in many States at present, such as Michigan, Missouri, Illinois, and Wisconsin.

The workshop program indicates that this work group should discuss various ways of developing and conducting promotional programs, including a great deal about decision making. Since this is a part of our area for discussion today, I thought you might be interested in seeing how research fits into the American Dairy Association's program in deciding how and what to promote.

In the American Dairy Association, we have to rely on market research even more than most companies, since we have no sales to analyze or salesmen to report. Market research is only one facet of the development of a well rounded marketing program, but it can be of considerable assistance in deciding the direction which promotional programs will take.

Research results going into our program development come from many sources. These include, in addition to work undertaken by the American Dairy Association itself, research results from other companies, from the colleges, and from the Department of Agriculture, and much market information which you yourselves collect.

In designing a product campaign, the first step is to decide on market targets. This means that we want to describe who our market is, who we are trying to reach, where they live, what type of people they are, how they look at our products, all so that we can decide how we can best influence the market. I would like to show you the American Dairy Association Market Targets for Butter and describe something of how these targets were developed and how they go into development of a particular advertisement.

These are our Market Targets for Butter:

1. For all housewives, particularly young ones, the uses portrayed should be primarily prestige cooking and all hot foods. Should stress prestige of use, natural qualities, and taste.

2. Merchandising--designed to improve display space and activities.

3. Although best potential market is in the Northeast and North Central regions, we should not neglect other regions.

4. The 40 percent of households who are users of both oleo and butter are the best prospects for increased use.

These market targets indicate the direction which our promotions on butter take and all of our advertisements on butter are developed within the framework of these targets.

Now for targets on milk. These are our Market Targets in our milk promotion programs:

Market Targets for Fluid Milk:

1. All adults; the teenage market should only be addressed through the young adult as an image.

2. All regions of the country, but areas with increasing trends in per capita consumption are the best areas for increased promotional and merchandising efforts, for example the Southern region.

3. Our largest problem is social acceptance; therefore, all copy should portray social, pleasant, believable situations related to the use of milk as a refreshing beverage.

4. Merchandising activity should emphasize reminders to purchase that extra bottle for weekends and when guests are expected.

Again, this indicates the direction which each of our promotion activities of fluid milk takes as a result of research indications.

This discussion indicates the way that we have developed the direction for our program through the guidance that research has given us. We have additional research results indicating how we should go about developing promotional programs for each major dairy product. All of this research information is available to you to assist in the development of your programs. In any way that we can work with you in the development of your promotions and any way that we can work with you in the execution of these promotions, we will be glad to cooperate.

PROCEDURES FOLLOWED IN PROMOTING MAINE BROILERS

William P. Charron
Maine Department of Agriculture

The Maine Department of Agriculture has been working closely with the rapidly growing Maine broiler industry for many years. The department set up quality grading programs, and inspection services, encouraged sound marketing programs, and promoted the product through the Maine Broiler Festival, cutting demonstrations, and retailer merchandising schools in the State. The industry has grown up, and is now Maine's leading agricultural enterprise. For the past few years, the cash farm income from poultry in our State has been more than $65,000,000 annually. As you can see, broilers are very important to the economy of the State of Maine.

Last year, broiler prices hit new lows. In all markets, quality Maine broilers were selling at ridiculously low prices. There was increased competition from new broiler-producing areas, as well as an oversupply in most markets. All segments of our industry were suffering and wanted something done to improve conditions.

At the invitation of the Maine poultry processors, who were organized as the Maine Poultry Associates, we began attending their weekly meetings. We listened to their problems, suggestions, plans, and what the group had to offer. The Associates wanted more market information, an advertising campaign, point-of-sale material, market service work, and a promotional program.

We presented the Associates with a plan, which was as follows:

1. Identification of their birds as a Maine product.
2. Use of the State of Maine Blue, White, and Red trade-mark.
3. Publicize the fact that all ready-to-cook Maine broilers are Federal-State graded for quality and inspected for wholesomeness.
4. Sell Maine broilers nearer home in such markets as Boston and vicinity. Do not depend on one major market. Look for new markets.
5. The Maine Department of Agriculture will plan and conduct market service and promotional work in the markets.

Arrangements were made with the Dairy and Poultry Market News Branch of the Agricultural Marketing Service for out-of-State poultry market information. We received the market news every Thursday afternoon and passed it on to our processors over the telephone. In return, we gave the Boston Market News office a complete report on the Maine broiler picture. In this way, we showed our processors what we could do and acquired their confidence in our program.

At the outset, most of the Associates were rather cool to identifying their product with the State of Maine Blue, White, and Red trade-mark. However, we were able to point out how successfully this label was being utilized by our potato industry, and once we were able to have one processor on the program, the others soon followed suit. At present we have 4 of our 5 large modern plants using our State of Maine trade-mark. It is being used very effectively, too. One company already has the trade-mark painted on the sides of the large trailers which carry the product to market. The other large plant is in the process of having its labels designed and printed.

To publicize the fact that their broilers were graded and inspected, while other areas were still waiting for the compulsory inspection bill to be approved by Congress, the Maine Poultry Associates decided to advertise. We suggested that they have two advertising agencies analyze their situation, and present programs to the group. One of the agencies quickly saw the importance of such a program as we had presented, and built its whole advertising campaign around the State of Maine trade-mark and the fact that Maine chicken was graded for quality and inspected for wholesomeness. The Boston market was chosen, and a 9-week campaign started in 4 daily newspapers. The advertisements were right to the point and very effective.

Prior to the start of the advertising campaign, two of our marketing specialists went into the markets and advised the trade of what was in store from Maine. All dealers and chain organizations were very receptive to the idea, and also liked the identification of the product with the Maine label. The advertising agency designed point-of-sale material which the marketing specialists distributed and used in setting up special store displays. They also appeared on radio and television programs. Whenever they made these appearances, they brought along trade-marked Maine broilers and kept them before the camera at all times.

During the fourth week of the campaign, the 2 marketing specialists participated in a 3-hour television show on Channel 4 WBZ-TV in Boston. Here they barbecued Maine chicken for more than 300 children and their parents. This promotion was a hit and the Maine barbecue was given 24 plugs during the show. Folks in Massachusetts, New Hampshire, and Maine reported having seen this program.

A few weeks later, one of our marketing specialists had an opportunity to set up a special Maine Chicken Barbecue in a supermarket parking lot for 3 days. The store guaranteed to furnish the materials and labor if we would bring the equipment and direct. We approached the processor who supplied this company with broilers, and, needless to say, he was most receptive to the idea, and very willing to cooperate. The barbecue was set up and went over very well. Sales of Maine broilers were beyond our wildest expectations. During the 3-day promotion, more than 17,000 halves were sold. The store also increased its overall business by $7,500-- or 11 percent. We did have several problems. The store manager wanted to sell chickens before they were all cooked, and didn't furnish enough labor to make the deal operate efficiently. Once these problems were straightened out, the deal went over very well. A week later we set up another barbecue in another town for a 2-day period. This one was even more successful, as it increased the store's business by 29 percent.

After these two promotions, supermarket parking lot barbecues became very popular and were in great demand by many of the leading chains throughout New England. We have even received a request from a chain organization in New Jersey. This type of promotion has been repeated many times, and last week the barbecue equipment was still being used in Massachusetts. Our marketing specialists at first actually did the barbecuing; however, as the different groups became more experienced in the work, our men directed and talked about Maine chicken with customers.

This fall, Ted Williams of the Boston Red Sox was given a gift of a Maine Chicken Barbecue by the Maine Poultry Associates. Tickets were sold at $10 per plate. Our marketing specialists put on this special promotion, which was televised throughout New England. Ted turned more than $1500 over to the Jimmy Fund from this event. The Jimmy Fund uses the money for children's cancer research. Maine broilers reaped free publicity in newspapers and television for several days.

In addition, our fieldmen also encouraged Maine folks to have more backyard and organizational-type barbecues. They did this by putting on demonstrations and attending meetings with various representatives of clubs, organizations, or religious groups. These groups were given technical assistance and shown how to prepare to stage a successful Maine chicken barbecue. In all, 27 organizational barbecues were arranged. Many folks were given an introduction to good eating, and the consumption of Maine broilers was greatly increased.

At the Maine Broiler Fesitval, where more than 15,000 people ate delicious Maine barbecued chicken, we gave out barbecue booklets and staged cutting and barbecuing demonstrations. We also worked with the festival committee in planning and setting up this annual event.

The marketing specialists also assisted in setting up and participated in a color movie entitled "Maine Barbecue," which our film department prepared last summer. This movie has already been shown at leading theaters in New York City and New Jersey and throughout New England.

We believe that our program has been effective in making the New England public Maine-chicken-conscious. After our advertisements began to appear in Boston newspapers, we observed that many chain stores were copying the ads, or using the words "Maine Grade A Chicken." Other advertisements stated "No Fancy Brands Here." This proved to us that our campaign was working and that customers were looking for Maine quality chicken.

The Maine processors now have their own dealer service men out in the markets. After observing how successful personal contacts by our men were, they hired their own fieldmen and began going after broiler business in earnest

Programs of this type are very difficult to sell to groups such as poultry processors. They are busy businessmen, and generally neglect their contacts out in the market. Occasionally low prices and certain market conditions make them sit back and listen. That is the time to present your program and to show them what can be accomplished. It takes time, and does not come about overnight. For example, we have been talking identification to our group for more than 4 years.

If you have a program that you believe in and you are willing to work hard, the group will usually be willing to back you up. You must sell yourself to the industry first.

CONCLUSIONS AND RECOMMENDATIONS

Work group on techniques of developing and conducting a program for expanding market outlets for dairy products

Those States who had experience in specific promotional programs were very generous in presenting examples and statistics showing the effectiveness of various promotions in the dairy field.

As a result of the discussions, the following information is reported, together with some conclusions.

1. In deciding what to promote and when to promote it, it was brought out that per capita consumption data were valuable in determining dairy items which showed low consumption figures. Promotion could then be concentrated on those items. One State provides sales information to the industry, which makes it possible for any distributor to measure his per capita sales with those of others in his area to determine if he is maintaining his share of the market.

2. In regard to groups participating in a program, one State reported the formation of an advisory group made up of all interested parties such as producers, distributors, State department of education, local American Dairy Association, restaurant association, chain store groups, radio and TV stations, college dairy and extension departments and chamber of commerce.

The Junior Chamber of Commerce and Farm Bureau and other farm organizations and county agents are other groups who can give valuable cooperation.

Some successful programs reported by various States included: (a) A TV milking contest, (b) a cottage cheese promotion tie-in with the Cling Peach Association, (c) a special ice cream promotion in which the sale of ice cream was increased in 1 supermarket on 2 successive weekends from 50 gallons to 250 gallons each weekend, (d) the establishing of a 7-minute milk break at the end of the second period in a small high school of 98 students, where milk consumption increased to 86 one-half pints per day,(e)working through teachers in schools and home economists of power companies and manufacturers to enlist additional promotional help, (f) assisting in developing point-of-sale cards and promotional material to concentrate on the large percentage of impulse buyers, (g) one State provides a service of aiding dealers in finding sources of supply in shortage areas, thus moving milk from surplus areas to deficit areas. This was particularly effective during a storm period when shortage occurred and supplies were needed in an emergency. As a result of this program in 1952, approximately 26 million pounds of milk was imported from outside the State in 1952 as compared with only about 7 million pounds in 1956, with about the same total production, (h) a "Milk Now and Coffee Later" promotion by ADA in one city restaurant showed a gain of 14 percent in milk sales and an increase in the average sales check during the period of 2.7 percent.

Promotional programs have been financed by tying in with American Dairy Association funds in two States and by special assessments paid by the industry, on a butterfat basis, in another State.

Following are some of the conclusions reached.

1. Availability of a high-quality product to the consumer is essential and effective in increasing sales; for example, making milk available in schools at other than meal time, and promoting home dispensers. Flavor of the product was reported to be better from a dispenser in the home.

It was recommended that a research study of the potential market for bulk dispensers in the home might supply sufficient data for home refrigerator manufacturers to alter the design of their refrigerators to incorporate a built-in milk dispenser.

2. It was pointed out that a successful promotional program must be built around the needs and desires of the processors and retailers and the confidence of processors and retailers must be obtained before the program would be successful. This is not always easy to do. One way of getting the support of the retailer is to show the retailer what profit he might expect from a certain promotion. In one case, it was shown that a certain promotion on cottage cheese in a supermarket returned over $9 net profit on a weekend in a space no larger than a card table. As a result, the promotion was continued for several weekends with a profit of not less than $9 to as high as $12 each weekend.

The cooperation of the stores can be obtained by learning what promotions they would like and when they would like them, and fitting the program around those facts.

3. There is a need for educational work on the part of the industry and the consumers as to the meaning and significance of grades of dairy products; and a need to encourage simplification and uniformity in terminology.

4. The American Dairy Association has a vast amount of promotional material and know-how which is available to any State wishing to utilize the assistance and tie it into it's program. Some States also have special promotional and educational films available.

5. A figure of 55 to 60 one-half pints per day per dispenser was reported by one worker as a break-even point for maintaining a dispenser. Above that, it was profitable; below that, it lost money.

6. Papers and journals dealing with merchandising at the retail level are very helpful for anyone in market promotion work.

CONCLUSIONS AND RECOMMENDATIONS

Work group on techniques of developing and conducting a program for expanding market outlets for livestock

1. One technique suggested for developing a program of work to expand markets for livestock was to conduct a survey of producers, market agencies and processors to determine their conception of problems and solutions. Such surveys provide a basis for determining the priority that should be given to programs of work or problems in the livestock marketing field. They also provide the State department worker with information on sources of interested leadership or persons in each group who will cooperate in a program which calls for active committee participation. Such surveys also make these persons and firms feel they are part of the planning process. Preliminary surveys also provide a broad base for the future support of a program of work.

2. The techniques for developing a program for expanding the market outlet for feeder pigs from a particular area included several specific features. Some of these were as follows:

(a) Strict disease control and sanitation measures. Concrete floors in marketing facilities which will permit regular and thorough cleansing inspire confidence in buyers. Vaccination and spraying, in accordance with the specific standards of State sanitation boards in the States to which pigs may be shipped, expand outlets in those States.

(b) Consistent sorting of feeder pigs by grade, weight, and sex and adherence to widely accepted grade standards encourage competition through telephone orders from out-of-State or distant buyers.

(c) Coordination of sale days within a region, so that distant buyers can minimize travel time and attend one sale each day of the week, encourages buyer competition from outside sources.

(d) Providing prospective buyers with advance information on probable volume of pigs available by grades and weights. Along with information on sale hours and conditions, this encourages attendance by responsible buyers from distant points.

(e) Though the handling of buyer orders from distant points may be necessary to develop adequate market outlets at the beginning, other means for handling such orders should be arranged for as soon as possible.

3. Expanding outlets for pork products may be effected indirectly through expanded grading of hogs, coupled with differential prices based on grade other than weight. Some of the problems involved in making such programs work are:

(a) Training personnel that can grade hogs on a meat-type basis.

(b) Getting the full cooperation of slaughterers in checking live grading with carcass cutout values.

(c) Making the hog grading program a basis for differential pricing of pork cuts at wholesale and retail should be encouraged. The group felt the hog and pork grade problem deserves more consideration and study by all interests.

CONCLUSIONS AND RECOMMENDATIONS

Work group on techniques of developing and conducting a program for expanding market outlets for poultry and eggs

General discussion included a comparison of promotional experience among the 16 States represented.

Ideas advanced by speakers Shelby Robert, American Dairy Association, Chicago, and William Charron, Maine Department of Agriculture, were reviewed with suggestions for desirability of tying in with national programs and the adopting of other States' ideas to meet local conditions.

Other key suggestions developed during discussion include:

1. Making more use of television and other opportunities to use demonstration methods, particularly of egg candling and broiler barbecuing.

2. Exchanging promotional information among States (extension, experiment

station, and other agencies as well as the departments of agriculture) through some central clearing station such as USDA or Poultry and Egg National Board, and obtaining better advance information on national promotional plans.

3. Encouraging industry and farm groups to participate in and foster needed promotions.

4. Studying the possibility of greater uniformity of State laws and regulations to broaden promotional opportunities out-of-State.

Proposed marketing service programs the group felt most important for adoption by State departments of agriculture include:

1. Eggs

A. Developing a service to assist retailers in better display methods for eggs, encouraging the use of more modern equipment and the use of merchandising techniques such as couponing, prizes, and other "gimmicks."

B. Working with carton manufacturers and dealers to get functional, attractive cartons or sales packaging for better appeal and less breakage or deterioration.

C. Compiling and disseminating consumer information with special attention to nutritional values and use at meals other than breakfast. "Defensive" material should be stockpiled for quick use to offset adverse dietary claims.

2. Poultry

A. Alerting consumers, as well as processors, to the provisions of mandatory Federal inspection, and examining companion State programs for best coordination.

B. Establishing a field program to encourage quality production methods for meat birds as a basic step prior to promotional effort.

C. Assisting processors using preservatives to adopt correct methods, and assisting consumers toward a better understanding of preservatives and other elements affecting home care of poultry.

TYPES AND SOURCES OF MARKET INFORMATION NEEDED FOR EXPANDING OUTLETS FOR DAIRY PRODUCTS

George H. Goldsborough
Market Development Branch
Agricultural Marketing Service, USDA

According to the program, we are to devote our attention to the kinds of information needed to assist in the movement of seasonal supplies, and to those needed for a long-time program of increasing sales. While it seems to me there is considerable overlap in the kinds of information needed for short-and long-time programs, there are some distinct differences in requirements. In addition, there are differences in requirements for various products and varous States. For example, States which must market the major proportion of their products in out-of-State consuming areas probably require a more highly organized marketing and promotional system than producing areas located in the midst of large consuming centers. A somewhat different approach is appropriate when abundant supplies of perishable fluid milk must be moved, in contrast to cheese or butter, which may be stored and marketed over a matter of months rather than days or weeks.

It is my opinion, and this is purely personal, that permanent and continuing market development should be the prime objective of marketing service workers interested in expanding outlets. Permanent and continuing development can gradually reduce the number of "fires" you have to extinguish. It is, of course, necessary to be tooled up to assist in disposing of temporary surpluses:

I. Information Needed on Volume and Price Prospects

A. Production

1. Historical:

Marketing service workers engaged in a market expansion program need to know production, including: (1) A volume series by areas within the State and for principal outside competing areas; (2) characteristics of the products, such as qualities and whether the product is perishable or one which may be stored for relatively long periods; (3) the number of producers and average size of unit in each local area. The marketing problem is normally much more difficult where a large number of small producers is involved. As a corollary, of course, the small producer is likely to need your help the most.

2. Current:

Marketing service workers who maintain up-to-date information on production estimates for fluid milk, cheese, butter, and other dairy products for local and competing areas can determine well in advance which particular products are likely to require their attention and the preparation of special promotional campaigns.

B. Stocks

Surplus situations may build up without unusually heavy current production, due to inventory accumulation. Marketing service workers need to know storage stocks by States and by principal markets normally served by the areas in their States. Information on stocks held in wholesaler and chain warehouses and in retail stores would also be helpful, though it is not presently available. Inventory information would be most helpful if it were broken down by quality of the product and size and type of package.

C. Prices

Day-to day decisions by farmers on when to sell milk are very minor, but there are opportunities to make some current operating changes that affect market supply. Data needed for these decisions are reasonably available on State and national levels but less adequate on some local markets. First receivers of fluid milk and cream are not able to make rapid changes in marketing practices; however, buyers and sellers at assembly markets need reliable reports of volume, quality, and prices paid, and alternate market outlets.

Market news covering retail prices and movement, though not presently available, would be quite helpful in evaluating the possibility for short-time market expansion in selected areas and in appraising effects of promotional programs.

In researching this subject, I have come to the conclusion that a major gap in dairy product reporting is the lack of supply and price information in local producing areas for sweet cream, ice cream mixes, evaporated and dried whole milk, and several types of cheese. For market news, it seems to me that techniques should be developed and utilized to cover retail prices and movement by grade and type of package. Accurate reflection of grade differential from the retail level to the producer, including local processors, would help translate consumer acceptability and encourage production adjustments to meet these preferences.

II. Information Needed to Fully Utilize Market Potential

Now, let's turn our attention to the marketplace where the ultimate demand for farm products is exercised. What types of data do marketing service workers need to know about and to develop to effectively assist in expanding outlets?

A. Potential buyers

Marketing service workers should be in a position to advise local dairies and processing plants as to the names and addresses of all potential outlets, including brokers, wholesale receivers and distributors, chain stores, and military installations and procurement districts in the State and adjacent areas, with supplementary data on products handled, volume, brands, qualities desired, and credit ratings. In reviewing the literature, the only published source of such information I discovered was a 1953 directory, "Who's Who in the

Dairy Industry," issued by the Urner-Barry Publishing Company. In all probability you will have to develop this information yourself unless you have already done so.

In addition, service workers should make it their business to be on a first-name basis with the key people involved whether they be the dairy buyers in corporate chains, the procurement officers of military installations or wholesale distributors. All other things being equal, promotion campaigns and the "hard sell" depend on friendship and personal contact. In addition, these key people should be supplied with brief, timely fact sheets covering up-to-date information on volume of production by qualities, and sources of supply.

B. Per capita consumption

Although total civilian use of milk in all forms last year was 13 percent above the 1935-39 level, per capita use was down 12 percent from the prewar level. These comparisons are on a whole milk equivalent fat solids basis. The decline in per capita consumption of butter more than accounted for this decrease.

Butter consumption per capita last year was only about half as high as the average annual consumption prior to World War II. The drifting away from fat consumption is evident also in the decline in cream consumption. Per capita use of cream which meets minimum butterfat standards for this product is now about 1/4 less than it was in the late thirties.

In contrast to the drop in per capita use of milk fat, the consumption of nonfat solids contained in milk has risen over these 2 decades to a total which is 21 percent larger than the prewar level of consumption.

Per capita consumption of milk in the form of fluid milk, cheese, and ice cream has increased substantially over the period. Fluid milk consumption per person was about 17 percent higher last year than in the late 1930's. Cheese consumption was about 45 percent greater. Ice cream was double the prewar figure. And nonfat dry milk consumption nearly trebled. Evaporated milk consumption, on the other hand, was down.

Studies of consumption by age groups show that persons under 15 consume about twice as much milk as those 15 and over. From 1950 to 1956, the percentage of the United States population in the under-15 age group rose from 27 percent to 30 percent.

A survey of household purchases in April-September 1956 showed that high-income families tended to use more butter per person than low-income families. Households with older housewives purchased about 50 percent more butter per family member than households with housewives under 45 years of age. Per capita usage of butter fell off sharply as size of family increased, and families with children under 12 years of age lagged behind other families in their rate of butter usage. Agencies endeavoring to expand markets need more detailed per capita use information to effectively concentrate their potential efforts on the areas and types of people of low consumption.

Various sources of regional per capita consumption data are the "National Household Food Consumption Survey, 1955;" "Household Purchases of Fluid Milk, Nonfat Dry Milk, Butter and Margarine," April-June 1957; and"Household Purchases of Butter, Cheese, Nonfat Dry Milk Solids and Margarine," April-June 1956. The 1955 survey showed consumption by the 4 census regions, by urbanization--rural farm, rural nonfarm, and urban--by family income for each level of urbanization within regions. The 1956 and 1957 household purchase surveys were developed from a continuous reporting service supported jointly by the USDA and the American Dairy Association through a contract with a private marketing research firm. Through this service, per capita household purchases of various dairy products and margarine are reported each month for the United States; each quarter by five regions; each year by family characteristics, including income, education and occupation of family head, presence of children in various age groups, age of housewife, and size of family. Thus the dairy industry knows a lot about where and an indication of how to develop a consumer advertising program.

There are some rather striking differences in individual household per capita consumption for the various regions. For example, using the United States average as 100, the per capita consumption of fluid whole milk in the Northeast was 127;the Pacific States, 118; the North Central, 112; the Mountain-Southwest, 87; and the South, 53. Conversely, the consumption of evaporated milk was three times as high in the South as in the North Central regions. Using the United States average again as 100, per capita consumption of butter ranged from 146 in the North Central region to 28 in the South; of nonfat dry milk, from 130 in the Pacific and 121 in the South to 77 in the North Central region; of cottage cheese, from 184 in the Pacific to 35 in the South; and of processed cheese, from 148 in the Northeast to 76 in the South.

The distributors of a major competing item, margarine, have apparently been much more successful in obtaining a relatively consistent level of consumption per capita across the Nation. In the second quarter of 1957, with the United States average as 100, margarine consumption was 124 in the Pacific, 118 in the Mountain-Southwest, and about 95 in the South, Northeast, and North Central regions.

Some of you may feel that regional per capita consumption data such as I have outlined may not completely serve your purpose where the commodities with which you are concerned move primarily to markets within your State or adjacent States. The most recent publication covering per capita consumption of fluid whole milk, milk drinks and cream by States and by individual markets within States is entitled "Nonfarm Consumption of Fluid Milk and Cream," MRR 72, May 1954. This shows 1944 information that was gathered under War Food Order 77, but never previously published. Cities with estimated populations as low as 61,000 are covered and there are some wide differences in per capita consumption between markets within States.

A 1956 publication, USDA Statistical Bulletin 168, brings these data up to 1954 for 19 individual northeastern markets. Should you desire per capita data for additional markets or to bring available data up to date, you can obtain approximations of milk sales for quite a number of markets from Federal and State agencies engaged in regulating milk prices or from milk distributors serving a market. A study by the University of Illinois, for example, shows consumption for 10 Illinois cities in 1949. Population estimates for intercensal years may be approximated by using the most recent census year as a base and estimating increases from statistical projections and from chamber of commerce reports, phone and utility hookups, and possibly other sources. Sales data for dairy products other than fluid milk and cream may be estimated from a review of purchase records of wholesalers and chain stores.

In case of cheese, butter, and other processed products, you should spend some time in the markets determining the retail availability of the products from your State. One of the first items of business in your work with a retailer is to insure that the store stocks a product, next to obtain better and more effective display and in-store promotions. Per capita comsumption data plus a picture of retail availability are quite helpful in designing consumer advertising and merchandising programs.

The potential that retail availability work offers is illustrated by a recent national survey on lamb by AMS. This study indicated that availability of the product was quite variable. Seventy-three percent of the stores in the Northeast selling fresh red meats carried lamb; in the West, 54 percent; in the North Central regions, 33 percent; and in the South, only 17 percent. There was also a clear relationship in each region in the availability of lamb at retail and size of city in which the store was located, size of store, and type of store, that is, whether chain or independent.

C. Merchandising

Marketing service workers need to keep abreast of trends in merchandising of farm products in order to advise marketing agencies in their areas attempting to enhance their positions in the market and to obtain the cooperation of retailers to use improved techniques for expanding retail sales. As most of you realize, methods of retailing have changed dramatically since the end of World War II. The initiation and expansion of nonfood departments in food stores give nonfood an additional shot at the consumer's dollar. In addition, supermarkets and superettes account for about 85 percent of all food sales. Such retail stores are essentially self-service stores and the retailers depend on improved merchandising techniques to increase sales.

The Market Development Branch conducted a study in Pittsburgh, Pa., in 1954 to evaluate the effect of specific merchandising practices on retail sales of mild and sharp natural cheddar cheese. Variety in packaging, price, and size was found to add significantly to sales of natural cheddar cheese--both mild and sharp. A 20-percent increase in sales over other methods of display was discovered with cheese bearing two labels, a prepacker's label at one price and the chain store label at a lower price, and with package sizes varying from 6 ounces up to 2 pounds. The most popular packages for the higher priced cheese ranged from 6 to 10 ounces; for the chain store brand the most popular sizes ranged from 10 to 14 ounces. Larger packages represented only about 15 percent of total sales, but contributed significantly to the total.

For butter, the experimental work to date has indicated that merchandising innovations in the retail store, such as size of display, location, and certain types of in-store material, have little effect on total sales. This indicates that the housewife must be influenced before she reaches the store in order to increase sales of butter, or that merchandising efforts must be intensified and modified. A recent merchandising innovation which may stimulate sales is the increased use of improved and more attractive packages such as pictorial cartons showing recipes and other end uses.

Important merchandising trends in recent years include (1) the introduction of new flavored drinks for fluid skim milk, (2) the introduction and promotion of a half milk and half fluid cream product to help maintain total consumption of milk fat, (3) the introduction of slices in cheese and new ingredients in cheese spreads, (4) better and larger unit packages for ice cream, with the half-gallon container becoming more important as home freezer space has increased, (5) the increase in popularity among consumers of half-gallon containers for fluid whole milk at the expense of single quarts, and (6) increased use of milk vending machines.

With respect to vending, a study has just been completed by AMS in cooperation with West Virginia University to assess the impact of the installation of vending machines on total milk sales in Martinsburg, W. Va. Preliminary results indicate that vended sales provide some net addition to the total. Should these be the final conclusions, marketing service workers will have a valuable sales aid in obtaining the cooperation of dairies and of office and factory operators in initiating a vending machine program. An accompanying consumer survey will reveal attitudes and opinions toward milk vending machines.

A study was conducted to appraise the effect of coupons and "special offers" on the sales of butter, margarine, shortening, and cooking oils, using consumer purchase data from a sample of 500 panel families in Chicago, Ill.

Preliminary findings to date indicate that coupons and "special offers" were virtually nonexistent in the purchase of butter. In the case of margarine, in contrast, almost half of the families who bought margarine reported one or more deals.

D. Trade and Consumer Preferences and Attitudes

In reviewing your last annual report, I noted that wholesaler and retailer surveys were being used rather extensively by some State departments of agriculture to provide trade opinions on the desirable qualities of specific products, types of package, promotion programs of suppliers, and other factors which might provide leads on means of expanding outlets by more effectively meeting consumer demand. Such opinion surveys can be helpful, but I hasten to caution you against relying solely on these opinions. In our research, both in merchandising and in consumer preference, we have found some rather strongly entrenched trade opinions relative to consumer behavior to be incorrect. May I suggest that such surveys be accompanied wherever possible by analyses of warehouse or store records to obtain data on inventories, receipts, volume of sales, and prices of different products sold or new packages used. This is a relatively inexpensive technique and affords an indication of consumer acceptance.

Much of the consumer preference work to date conducted through household interview by the Market Development Branch has been on textiles and citrus fruits. However, a report has been issued on taste-preference findings from a controlled consumer panel experiment for white breads varying in fat, sucrose, and dry milk, and in loaf size. It was found that a "rich" ingredient mix was preferred over a "lean" mix; increasing the fat content from 3 to 5 percent had no significant effect on preference; increasing sucrose from 2 to 7 percent, on the other hand, did increase preference; and increasing nonfat dry milk content also increased preference up to 4 percent dry milk, but not beyond.

Consumer opinion surveys for dairy products have been conducted elsewhere. For instance, a consumer survey was undertaken by the Alabama Agricultural Experiment Station in 1954 to determine the influence of family characteristics, occupation and income, and the influence of store offerings and retail services on the purchase of some dairy products.

Respondents were queried on kinds of foods they thought their families should have every day. Only 21 percent of this group named milk first in their listing of foods. Of the 168 families who did not mention milk as a food needed daily, 79 percent named it as a beverage needed daily.

In households where both bottle and carton containers of milk were used, 25 percent expressed a preference for cartons, 60 percent preferred bottles, and 14 percent had no preference. The reasons most frequently given for preferring bottles were: Better taste, cartons leak, and more sanitary. General convenience accounted for most homemakers' preference for cartons.

Competing products were used by practically all families. On the average, coffee and orange juice were the greatest competitors.

Thirty-one percent of the homemakers who saw or heard advertisements said that advertising influenced them to buy or to use more of a particular dairy product. The three forms of advertising most mentioned were television programs sponsored by milk and dairy product manufacturers, radio advertisements, and labels on products purchased or seen in stores.

A consumer study conducted in 1956 by the Politz Research Company measured public attitudes and uses of dairy products. This was the sixth of a series of such studies undertaken by Politz for the American Dairy Association.

A national probability sample of 4,111 respondents was used in which selections of respondents were made at random so that each person's chance for inclusion was equal. It was found that milk drinking at meal time has increased over the last 2 years, and that the largest increase has been at supper. Many adults sometimes have a desire to drink an extra glass of milk between meals, but are not able to satisfy that desire because they do not have a sufficient supply on hand. Maybe vending machines can help fill this need.

Housewives recognize the advantage of cheese in meatless meals. Three-fourths sometimes use cheese in this manner. The usual method of serving cheese is in sandwiches for lunch.

E. Product development

The dairy industry is greatly interested in the possibilities that a uniformly high-quality sour cream product offers for increasing the consumption of butterfat. A current study concerns the market potential for cultured sour cream. The industry is cooperating with the Department in conducting a market test for cultured sour cream in Des Moines, Iowa, an area of heretofore limited availability, to ascertain prospects for expanding sales through a program of promotion. Results of this work will be published in a few months.

Other product development work on new or improved dairy products is anticipated. Of particular interest is the development of dried whole milk. The major problem remaining to be solved is the stability of this new product form. When the physical scientists solve this problem, a large-scale program of market develoment research will be carried out in which other Federal and State agencies probably will be interested in participating.

F. Influence of School Milk Program

A preliminary report was recently released on "Participation of Schools and Pupils in the School Lunch and Special Milk Programs in March 1957." The report showed that 49.6 percent of the Nation's public elementary and secondary schools, with 68 percent of total enrollment, were participating in the National School Lunch Program, and 63.1 percent of the schools were participating in the Special Milk Program at that time. Not all pupils were participating, however. Under the School Lunch Program, participating pupils in participating schools averaged 45 percent, with the resulting estimate of 30 percent of all public school pupils participating on a fulltime equivalent basis. Details are available by regions, by population density, size of school, and grade level of pupils. A more complete analysis will be given in a final report, which will associate physical characteristics and practices of schools, and other factors, with participation.

Case studies conducted in St. Louis and Los Angeles revealed an unexpectedly high response in milk consumption to lowered prices under the Special Milk

Program. Generally, consumption of milk increased most in schools serving low-income communities--a result which has since occasioned a policy change in at least one other city school system. Additional times of serving milk during the school day also tended to stimulate milk consumption significantly among those schools having additional times of serving.

G. Statistical Techniques for Measuring the Effect of Advertising

I should like to make some comments in regard to measuring statistically the results of sales promotion campaigns. The usual research technique is to count noses of listeners or readers to determine their degree of awareness of memory of advertising message. This can be done. But it does not measure response in terms of dollars and cents, which is the most meaningful to those who support promotional campaigns.

What do promotion programs mean in terms of increasing or maintaining sales of or prices for a product? Is the promotion program affecting the course of net returns received, and how much? These are the really important questions which need to be answered. Measuring the effects of a promotion program for products that have been long on the market is quite difficult, because usually there has been some prior promotion of some kind, leaving certain accumulative effects, and because the variables are numerous and somewhat difficult to tie down. For new or improved products or products of unusually low per capita consumption in an area, promotion programs are likely to show more dramatic sales results. Any attempt to properly appraise promotion is relatively expensive.

The technique we employ to assist in evaluating the short-run effects of promotional efforts in a city is through a retail audit of sales in a stratified random sample of food stores during three different time periods of equal length, before promotion, during promotion, and after promotion. When this technique is used, a direct comparison of sales between the periods can be made only when all factors affecting sales other than promotion remain the same during the periods. However, this is never the case. In fact, the most constant characteristic of the market is change. Some of the quantifiable factors likely to affect the sales of a product at the retail level are its price, promotions of competing items, and the display space and availability of the product being promoted and of competing items. A number of these factors frequently change between the periods being compared, and allowances must be made for their effect upon sales.

It should be noted that, in this technique, the prepromotional period is the only benchmark for measuring change in sales, if any, during the promotional period. Furthermore, only single periods are available for comparison. Consequently, there is less chance of detecting results which might have occurred purely because of some unusual condition. These limitations can be reduced by the addition of a nonpromotion city, which we will call the control city. In addition to comparing sales results between time periods, an additional check can be obtained by comparing the change in sales between cities during like time periods.

To be most useful as a guide, a control city should be as comparable as possible in major respects to the test city in such factors as size of population, per capita disposable income, types of industry and geographical location. If several pairs of matching control and promotion cities could be used, the results would be still more reliable and the need for statistical adjustments reduced to a minimum.

Incidentally, I have here a "Handbook for Dairy Advertising" issued by the Idaho Experiment Station, in which you may be interested.

Conclusions

As I understand it, the State departments of agriculture under the Matching Fund Marketing Service Program and with State funds alone are, in many areas, engaged in projects to further refine production reports at the local level. For instance, in Wisconsin, according to your annual report, data were compiled and analyzed on the production of milk on a township basis to provide plants with basic background information needed in view of the changing supply situation. In addition, a report is being prepared from the study to portray local area variations in the supply of grade A milk and present data concerning the pricing of milk and its utilization.

From this example and the new experimental market news programs being developed for local areas it appears that marketing service workers are aware of the requirements for local production and price information. However, it seems to me that you, as well as the rest of us, may not be effectively using the market development information presently available, nor have we done much more than scratch the surface to provide better guides in fully exploiting market potentials.

To expand outlets, marketing specialists should:(1) Disseminate information on standards and quality which should result in increased sales; (2) devote the largest proportion of your time to grade A milk, since this is the largest outlet and it promises the greatest returns to producers; (3) devote your attention to areas that are lagging in consumption of dairy products; (4) endeavor to obtain larger retail availability of dairy products, the use of better merchandising techniques, and use of discount plans to increase sales of fluid milk based on the number of quarts per delivery or per month; (5) encourage the installation of milk and ice cream vending machines in locations of heavy pedestrian traffic; (6) insure that producers and processors have the best information possible on how to advertise and promote; (7) pull together the available market development research findings issued by the USDA and State universities and assist processors, distributors, and retailers in applying these results; and (8) bring problems needing research to the attention of researchers in the USDA and State colleges.

CONCLUSIONS AND RECOMMENDATIONS

Work group on marketing information needed in a program to expand market outlets for dairy products

The speaker at the group session, on the subject how to make effective use of marketing information in dairy product promotion, answered most of the questions in everyone's mind as to information needed, where certain information was available, and how it might be used in market promotion. However, in the discussion of the group which followed, the following conclusions were formulated:

1. We need to make better use of the data and information already available from such groups as:

   a. American Dairy Association
   b. U. S. Department of Agriculture
   c. Industry trade association (Milk Industry Foundation)
   d. Market News Service--State, Federal
   e. Colleges
   f. Federal market milk administrators
   g. State marketing statistics gathered in non-Federal market order areas

2. We need continuing studies and research information relating to:

   (a) Trends in the industry
      1. Production
      2. Transportation
      3. Processing
      4. Wholesaling and retailing
      5. Packaging

   (b) Consumer preferences as to:
      1. Quality of product
      2. Sizes and kinds of packages
      3. New products
      4. Competitive products

   (c) Regional data as well as national data
   (d) Population shifts
   (e) Per capita consumption data
   (f) Any other factor which will in any way affect the total consumption of dairy products

3. We need to have data made available to all interested parties while the information is current and applicable -- out-of-date information is of little value in guiding the progressive merchandiser in this fast-moving age.

CONCLUSIONS AND RECOMMENDATIONS

Work group on marketing information needed in a program to expand market outlets for poultry and eggs

It was stated that several States provided a daily reporting service of egg receipts at major terminals in the State, originating from local production and from out of State. A similar service was provided on a weekly basis for the movement of poultry. Experience showed that such information was helpful to service personnel in assisting in directing movement of eggs and poultry away from the areas with abundant supplies to areas in short supply.

It was felt that more use should be made of data on direct consumer purchase of eggs and poultry by using sales information from large chainstores. Such information could furnish valuable statistics for intensive sales campaigns when abundant supplies of the product are anticipated. This could serve to reduce sharp market fluctuations and a more equitable price structure.

Several States expressed concern over the continuing tendency of several large markets such as New York, Detroit, and Chicago to influence the market prices determined, though active trading was at shipping point, and in spite of the fact that very little trading takes place in these large terminals and does not reflect a true picture of trading activity. Further,in areas where local trading is not reported in actual price transactions, the market is frequently determined by a shipping differential being added to the market price quoted at one of the large terminals. Thus, the price frequently paid at shipping point reflects an artificial value established in a market miles from the trading and frequently far from the true commodity value.

There was considerable feeling that the package style, shape, and color is frequently predetermined by the container manufacturer or by preconceived notions of the packer. It was realized that considerable research has been carried forward in this field, but no single package of information was available in the poultry and egg area that could serve as a guideline for the industry and the field service personnel. It was felt that rather wide sampling of consumer preference as to package acceptability should be the basis for determining package style and color, rather than preconceived ideas of packers and packaging materials manufacturers.

It was the general feeling of most States represented that efforts of trade associations and the general industry had produced more usable statistics and sales campaigns on poultry than on eggs. It was felt that more aggressive action was needed to furnish such helpful material to the egg industry. If sales campaign materials could be developed and a workable sales plan could be prepared in anticipation of surpluses, much more could be accomplished than when such plans and materials are not available until the peak of a surplus is reached.

As an important step toward expanding egg and poultry outlets, it was generally felt that much could be accomplished by a study and analysis of existing containers, their display features, and the general matter of retail-level display of both poultry and eggs. This is particularly true in relation to the rapid strides made in new methods of preparing poultry, while the containers have changed very little and the methods of display are long outmoded.

GRAIN, SEED, COTTON, AND TOBACCO

Work Group Sessions

EXPANDING MARKETS ABROAD THROUGH COOPERATIVE EFFORTS OF USDA AND INDUSTRY

Richard H. Roberts, Deputy Assistant Administrator
Foreign Agricultural Service, USDA

Over the past four years, we have had the Foreign Agricultural Service on a broad operating basis, with the agricultural attaches under the Department of Agriculture. Instead of working primarily in liaison and service to other agencies, the Foreign Agricultural Service works mainly to provide service to American farmers and their salesmen, the U. S. private export trade. Much of this is done first by operating the largest network in the world for collection and analysis of intelligence information on foreign agriculture. Then this intelligence is put in a form that is usable by those in this country who are serving American farmers.

We have over 77 attaches and officers in 50 countries over the world. Their reports are analyzed in two main approaches: Policy and commodity. As to policy, the reports are summarized and interpreted on the basis of each foreign country and area, on a regional or geographical basis. Here is a new publication bringing up to date information that had been originally summarized and published 25 years ago, again 19 years ago, and then again 4 years ago -- "Agricultural Policies in Foreign Countries."

We find more and more that information is our most important commodity. We put out regional reports like "Agricultural Developments in South Asia -- Their Effects on U. S. Farm Exports (FAR 100)." Also, "Technological Factors in the Expansion of Agricultural Production in West Europe - (FAR 102)." Another is "Status of Quantitative Import Control Over Selected U. S. Agricultural Exports--16 European Countries - (FAS-M-11 Rev.)." Another example is, "Notes on the Agricultural Economies of the 20 Latin American Republics - (FAS-M-10)."

Other important publications issued by FAS which you will be interested in as you begin to look more at our export markets are the following:

1. Annual chart book, entitled, "The Problem of Maintaining High Level Agricultural Exports -- Charts and Maps."
2. Monthly magazine - "Foreign Agriculture."

3. Monthly "Foreign Agricultural Trade of the U.S." -- a statistical report.

4. Monthly "Foreign Trade."

Our commodity analyses and interpretations come out every week in "Foreign Crops and Markets." We obtain the crop reports of foreign governments and private estimaters, then make evaluations from our own experience and issue regular crop reports on foreign production.

We report exports and imports of other countries,and their trade with each other and with the U. S., and issue reports of the international trade in individual commodities. We analyze the competitive position of our export commodities from the standpoint of foreign production, for example, -- "Mexican Cotton -- Production, Probabilities, and Potentialities," and "Syrian Cotton -- Production, Exports, and Prospects." We also analyze the market prospects for U. S. exports, such as "Mexico as a Market and Competitor for U. S. Agricultural Products." We report on the progress of our programs, like "Beef Breeding Cattle Inspected for Export from the U. S.," also the same on dairy breeding cattle.

We have a number of marketing specialists in each Commodity Division. It is their job to spend about one-third of their time traveling in foreign countries helping the agricultural attaches uncover markets for U. S. products and bringing the information back to the trade in the U. S. Also, they develop techniques for uncovering market opportunities and for enabling our trade to take advantage of them. These marketing specialists exchange ideas on export marketing techniques and description of accomplishments, and pass these on to the agricultural attaches and the U. S. trade. In this way, they stimulate each other with new ideas and techniques.

"SPOTLIGHT on Foreign Marketing" is the new house organ we have developed to facilitate this exchange of ideas and accomplishments as a stimulant to inspire new ones. It is distributed only within FAS but is used by attaches and marketing specialists for quotation to traders when appropriate.

The first annual market development report, entitled "Developing Foreign Markets for U. S. Farm Products -- a Summary of Promotion Activities," outlines the main market development work being done. It starts by describing the export situation to indicate the importance of exports to U. S. agriculture. Bringing this up to date, we should recognize that the $4.7 billion of agricultural products exported in the year ending last June is an all-time record. It resulted in exports of the products of 1 acre out of every 5 of our U. S. production.

The activities described in the market development field are:

1. U. S. trade programs -- Government financing, like foreign currency sales, dollar credits, foreign aid, grants, and donations.

2. Reducing foreign trade barriers -- obtaining access to export markets for U. S. products.

3. Market surveys and analysis -- obtaining information of value to the U. S. trade.

4. Projects using foreign currencies -- special activities financed in part by a small percentage of the Government funds available from the sales of surplus products for foreign currencies.

5. International trade fairs -- important exhibits which attract much more attention of importers and business firms than fairs generally do in the U. S.

6. Private trade activities -- a description of the export promotion activities of private trade associations and firms which are utilizing the Government assistance only to the extent it is available as a regular service to the private trade.

7. Market information and services -- a summary of the information materials and the service functions performed by FAS, including the commodity marketing specialists.

All of these functions are described separately by commodities because the market promotion interests of the trade are generally on a commodity basis.

The market development projects which use foreign currencies are considered to be temporary on the grounds that the foreign currency sales are temporary and that the resulting foreign currencies will run out within a few years. The Foreign Agricultural Service generally carries these projects out by contracting with the U. S. trade on a commodity basis. In this way, it is expected that the substantial contributions made by the commodity trade associations will result in their taking the greatest possible interest in obtaining the best results for the smallest expenditures. In addition, they will be in the best possible position to enable the commodity exporting firms to take advantage of foreign market opportunities. Furthermore, when the foreign currencies are no longer available, it is hoped that these promotion activities will have proved so successful that the private trade will wish to carry them on entirely at their own expense.

We believe our experience with the growth of self-service food supermarkets abroad - stimulated to a considerable extent by our exhibits - indicates a market for a number of years ahead for many highly processed and packaged goods from the United States.

Now, how about participation by State departments of markets and agriculture?

To cooperate in foreign market promotion, State departments can do two main things: (1) With personal contact among local handlers, processors, and packagers, they can disseminate a vast amount of information about how these firms can sell in export markets; and (2) with qualified personnel that might be made available for short periods, they can carry out some of the foreign market surveys for the national commodity associations which may have difficulty obtaining adequate personnel.

These two functions are highly complementary. To disseminate information about market opportunities, the State departments must be supplied the information -- not only about the specific sales possibilities, but also the special business procedures that are used in export business. In supplying this to the States and keeping it up to date, FAS will need to prepare more information in concise, usable form, and furnish it to the State departments, in cooperation with the Agricultural Marketing Service.

But even more important, to get started in this work, the State personnel needs to obtain a better personal understanding of the export opportunities and business techniques. We think the way to open the door with the commodity association is to start by asking how you can carry to the firms in your State the information about the results of the export surveys they are making. Once you get them interested in getting your local firms to try making some export sales, you can inquire whether one of your qualified men could help on a market survey in a foreign area. You could offer a man's time for possibly 2 months, sell the association people on his ability to dig out the facts, and come back with a good report.

The big benefit to you will be that your man will have the opportunity to learn firsthand about the export market opportunities. He will find out how firms can make export sales without having to be afraid they will not receive payment for the shipments. A way you might get this done would be to work out a project agreement or subcontract between your State department and the commodity association that has a project agreement with the FAS. You could furnish the time and salary of your man for a couple of months. The commodity association could put up some dollars from their own treasury. They could also, with concurrence from FAS, furnish foreign currencies to pay for transportation and living expenses on per diem and some other project expenses. This foreign currency would come from FAS out of the funds obtained from sales of surpluses under Public Law 480.

We in the Foreign Agricultural Service believe the importance of getting into this export field through small shipments of highly processed and specialty items, as well as raw products, is emphasized by these points:

1. The produce from 1 acre out of 5 moved into export in this past year ending in June. That is an outlet to hang onto, and to expand if possible.

2. The majority of those exports were bought for dollars by the importers of other countries -- not paid for by special U. S. Government programs -- and the way to increase the portion that is sold for dollars is to promote sales.

3. The surge of economic development in countries throughout the world and the new distribution developments like the strong start of supermarkets means that, for several years ahead, at least, the foreign consumers and distributors are going to want more and more American specialty and luxury products. Promoting these will contribute materially to our ability to maintain this 1 acre out of 5 in export sales and to put more of it on a commercial dollar basis.

OPPORTUNITIES FOR DEVELOPING OUTLETS FOR GRAIN

W. Dayton Maclay
Director, Northern Utilization Research and Development Division
Agricultural Research Service, USDA
Peoria, Ill.

Section 209, Public Law 540, 84th Congress, 1956, provided for the Presidential appointment of a Bipartisan Commission on Increased Industrial Use of Agricultrual Products. The Task Group on Industrial Uses for Grain (Other Than Alcohol), in reporting to this Commission, summarized the collective thinking of its members on the importance of cereal crops to our national economy, and suggested a three-prong research attack to find new uses for them. I quote:

> "The cereal grains provide the broad base upon which the Nation's agricultural economy is built. They are grown on more than 60 percent of our tilled acreage, in every State of the Union, and on the great majority of farms. Corn and wheat provide the largest ultimate returns to the farmer of all crops, and corn--along with the other feed grains--is basic to the Nation's livestock, poultry, and dairy industries.
>
> "Of all agricultural commodities, the cereal grains are in the greatest surplus. Cereal grains constitute about 60 percent of recent inventories held by the Commodity Credit Corporation. Wheat and corn account for 95 percent of this amount. This inventory is costly from four standpoints:
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> (1) The relatively low rate of return through foreign disposal, (2) cost of storage and loss through deterioration, (3) the depressing effects on the domestic market for wheat and corn,

> and (4) the economic loss to farmers because the existence of these inventories requires restrictive measures on production.
>
> "In the outlook for the next 20 years, indications point to the total consumption of grains as food at approximately current levels. Greater consumption of grain for feed in an expanding livestock industry will be offset to some degree by development of feeds of greater efficiency and wider use of forage and roughage. In short, if farmers were to produce on acreages previously planted to grain, there would be a very considerable excess over domestic food and feed requirements for the next two decades which must find outlets through foreign channels and/or conversion to industrial uses. Exports, although at a current high level, have not provided the solution, either from the quantity consumed or from the financial return obtained. Increased utilization through industrial uses for grain appears to have the most attractive possibilities. In view of the importance of cereal grains to our agricultural economy, utilization research should be directed toward the development of new and expanded industrial outlets. Therefore, grain utilization research needs to be conducted on a scale commensurate with the importance of this foremost problem in agriculture.
>
> "However, it is considered highly improbable that many industrial uses for grain will consume the whole grain product, and hence certain fractions will be perforce produced as byproducts to the principal processing or conversion operation. Such byproducts may have their highest economic value as food or feeds, or can be further converted into high-unit-value foods or feeds. It is therefore recommended that research and development efforts in the production of foods and feeds be an integral part of the program for the industrial use of agricultural products."

Let us now consider in more detail these three lines of approach to the alleviation of the grain surplus problem, namely, food, feed, and industrial products.

Food markets constitute by far the largest and most lucrative outlet for wheat; and food uses require major portions of our rye and barley crops. Failure to even maintain the per capita consumption of wheat has been a major factor in the development of the current surplus situation. In terms of wheat flour, per capita consumption has declined from 152 pounds as recently as 1940 to 121 pounds in 1955. Had this decline been prevented, farmers would now be marketing an additional 120 million bushels of wheat per year for domestic food uses. During the same 15-year period, per capita consumption of corn in food products decreased about 25 percent from 35.5 pounds to 27.6 pounds.

In contrast to wheat and corn, per capita consumption of four other cereal grains (oats, barley, rye, and rice) for food did not change markedly, but it amounts to a total of only 11.5 pounds per year in the United States.

The important contribution which wheat and other grain products make to diets of this country is well recognized by the Department of Agriculture. These cereal products supply about a quarter or more of the food energy, protein, iron, thiamine, and niacin values of present-day diets. Consequently, current dietary recommendations made by the Department's Institute of Home Economics list bread and cereals as one of the four major food groups which should be used daily, four or more servings of whole grain and enriched or restored bread being recommended. Because grain products provide nutrients in relatively inexpensive form, the USDA particularly recommends them in generous amounts for diets of families with low incomes.

In view of these facts, an important part of the USDA research attack on the cereal grains is aimed at development of food uses. Intensive development of products and processes, aimed to improve palatability, nutritional value, and convenience, and to reduce costs, could maintain and possibly expand the per capita consumption of these food products.

Opportunities for increasing the use of cereal grains, particularly wheat, as food products include the following:

1. Development of new and improved baked cereal foods in accord with current concepts of good nutrition, and with increased consumer acceptance because of greater economy, new flavors and textures, and better maintenance of fresh-baked quality.

2. Development of new and improved processes for the production and conversion of wheat gluten and wheat germ for use in making new and improved foods.

3. Development of processes other than baking for the preparation of unusual types of cereal foods with enhanced palatability and nutritional properties.

4. Development of radically different milling methods for wheat, barley, oats, and rye, based on study of their physical structure and chemical composition, for the production of better and cheaper foods.

The Northern and Western Utilization Research and Development Divisions of the Department of Agriculture have limited research programs in certain of these areas. To make bread and other bakery products more attractive to the consumer by making them available in "oven-fresh" condition, work is being directed toward isolating and identifying those agents which we associate with the aroma and flavor of fresh bread. At the same time, attempts to preserve desirable qualities of freshness are being made through establishment of the best conditions of freezing, storing, and thawing of bread and other bakery products. Also, better retention of freshness in bread is being sought through the development of effective bread-softening agents. In the processing field, basic information on the structure of the wheat kernel, how it absorbs or loses water, the way in which the kernel breaks between rolls, and the separation of the floury part of the kernel from bran during milling has been developed as an aid to processors.

An improved continuous "batter process" has been designed and is being studied for the wet milling of wheat flour into gluten, starch, and soluble fractions. This process is planned to recover the highest quality undenatured gluten and prime quality starch and to recover the solubles fraction at the lowest cost. The continuous process uses simpler equipment and gives good indication of lower power and water requirements than is the case with the wet-milling processes now in general use for wheat flour.

Let us now take a look at the opportunities for greater use of grains as feedstuffs. Wheat, corn, and sorghum, pound-for-pound, have essentially the same feed value but, because of their price differential, relatively little wheat is used as feed (60 million bushels of wheat as contrasted with 2,750 million bushels of corn).

Opportunities to further increase the use of grains as feeds include:

1. Conversion of cereal grains to microbial protein concentrates of high nutritional value, to improve the feeding value of cereal grains and expand their use in livestock rations.

2. Microbial conversion of grains and their byproducts to produce growth factor substances having utility in poultry and livestock feed, including newly discovered vitamins as well as carotenes, xanthophylls, and related compounds.

I should like to briefly describe one line of research now in progress at the Northern Regional Laboratory in each of these two fields. In the microbial conversion of grain into high-quality protein, we have surveyed approximately 500 strains of bacteria, yeasts, and molds from our culture collection for their ability to produce protein unusually rich in lysine, methionine, and tryptophane, essential amino acids in which the cereal grains are deficient. We have found organisms which contain 12 percent lysine in their protein--twice that found in the protein of soybean meal. It may be possible to increase the original amount of the desired amino acid in a promising strain of microorganism still more by altering its genetic characteristics or through nutrition studies. Our goal is the production of microbial products with 20 percent of the desired amino acid in their protein. Rough estimates based on the composition of prevailing rations and on the requirements of farm animals for amino acids indicate the need for perhaps 400,000 tons of supplemental amino acids annually. Assuming economic yields, it is calculated that 100 million bushels of grain or more could be used each year in fermentations for this purpose.

An example of the microbiological production of vitamins or growth factors is our work on carotenoids. We recently announced a fermentation process for the production of B-carotene (pro-vitamin A), required by all animals, through use of a technique for mating specially selected microbes. Using a technique discovered by a mycologist at the West Virginia Agricultural Experiment Station, Dr. Ralph Anderson of our laboratory found that nutrient solutions made by treating ground corn or other cereal grains with acid are fermented by the mated forms of certain members of the mold family, Choanephoraceae, and produce B-carotene in their cells which can be readily concentrated by filtration. The resulting product is a bright orange filter cake, or mat of solids, which may contain 1/2 percent or more of B-carotene. We feel that this product can be made competitive with other sources of vitamin A, including the synthetic.

Significant increases of industrial uses for cereal grains are likely to be the result of successful developments in several different directions. Let us now take a look at some of the potential large-volume outlets for cereal grains. The one technically feasible avenue for consuming vast quantities of grain at the present time is conversion to ethyl alcohol and its use as a motor fuel or as an intermediate in the production of synthetic rubber. If our current use of more than 50 billion gallons of gasoline were to contain 10 percent alcohol as a blend, more than 2 billion bushels of grain would be required annually to produce the alcohol. Similarly, 200 million bushels of grain would be required to produce sufficient alcohol for conversion to butadiene for manufacture of this country's 750,000 tons of synthetic rubber production. What would be the return for the grain to produce alcohol for these purposes? As a blending agent with gasoline for motor fuel, alcohol would be competitive with butane, a low-cost component of present gasolines. At best, alcohol would be worth no more than bulk gasoline at around 13-1/2 cents per gallon. This would allow little or no payment for the grain.

The aforementioned Commission's conclusion was that, of all possible industrial outlets available for alcohol at this time, conversion to butadiene for the production of synthetic rubber would be the least costly. Moreover, this outlet, involving, as it does, a rapidly expanding synthetic rubber industry, would entail the least dislocation. The Government has an interest in 2 plants with maximum intake capacity of 229 million gallons of alcohol, equivalent to 84 million bushels of grain. The return for corn was estimated to range from 11 to nearly 50 cents per bushel. At the then current price of 15 cents a pound for butadiene, alcohol at 23.4 cents could be used for production. Under these conditions, the corn would net about 26 cents per bushel. Some assumptions are involved in these calculations and exact economics would have to be determined by plant operation. The Commission did not recommend that the alcohol-butadiene-rubber outlet for grain be implemented. It simply set forth the facts and figures for this outlet as being the best of certain possibilities.

Turning to potential large-volume outlets for cereal grains other than through conversion to alcohol, the Commission received suggestions from representatives of the corn wet-milling, corn dry-milling, wheat, other small grains, and fermentation industries, as well as State agricultural experiment stations and USDA representatives, as to broad areas where research, in their judgment, held promise of yielding fruitful results. A study of the task groups on grain and the Commission's final report indicates fields that afford the most promise for expanding the use of cereal grain and cereal grain products in the industrial sphere. Examples of these are:

1. Paper and paper products--not only as a size, coating, or adhesive, but also as an integral part of the pulp fiber.

2. Metallurgical industries--flotation separation of ores; pelletizing of iron ore; core binders in foundries; blasting and polishing agents; field of electroplating.

3. Building materials industries--structural additives and binders in insulating board, hardboard, panelboard, and core stock; plasticizers, emulsifiers, and controllers in concrete, mortar, and plaster.

4. Fibers and film--development of a corn with high-amylose starch for industrial use, such as cellophane-like film, and fibers that might find use as a blending agent with wood pulps; water and decay-resistant films for plywood, adhesives, water-based paints, paper size, insecticide application, asphalt binder.

5. Soil conditioning agents--soil treatment to impart rapid water drain-out in highway roadbeds; prevention of erosion on embankments; conditioning of texture, permeability, and water-holding capacity of soils in crop production.

6. Water treatment--sewage and water treatment; retardation of silt sedimentation in rivers; sorption of metallic and nonmetallic ions from sea water; soil-sealing agents for reservoirs.

7. Industrial chemicals--dialdehyde starch for the production of improved polymers and chemical intermediates; products from wheat gluten and flour; fermentation acids; surfactants for application in petroleum, textiles, food, paper, and related fields; industrial enzymes; carbohydrate polymers; antioxidants for rubber and petroleum products; herbicides, fungicides, insecticides, and their adjuncts.

This list, of course, is not exhaustive. It does show the type of industrial outlet that cereal products have an opportunity to expand. It is difficult to determine the potential magnitude of such uses. The corn wet-milling task group placed a figure of 1,310 million bushels of corn as the maximum or potential volume use which might accrue from the research projects it suggested; the corn dry-millers indicated an additional annual usage of 106 million bushels; and the Commission's report (p. 85) states, "With economic incentives, in addition to the use of 100 million bushels of cereal grains in the fermentation of alcohol, task group reports indicate that another 300 million bushels of cereal grains might be channeled into other uses. This could be done with present plant capacities operated by private industry."

In the field of industrial uses for cereal grains, the Northern Division has programs on dialdehyde starch and its products; the development of high amylose starch and its uses; the processing of wheat flour into starch, gluten, and solubles fractions; chemical derivatization of starch, gluten, and wheat flour; organic acids by fermentation; soil conditioners; microbiological polymers; basic research program on the cereal grains and their processed products and individual components.

In conclusion, I think it would be appropriate to refer again to the summary of the report by the President's Commission. After listing the various facets of the problem, including the ability of the American farmer to produce more than our economy presently consumes and will likely consume even with a growing population and rising standard of living, and the unlikelihood of an increase in exports as other countries become more self-sufficient, the Commission poses the following question:

"Can the economy develop profitable industrial markets capable of absorbing enough of the excess farm production to minimize, possibly even to eliminate, the need for costly restrictions, supports, and surplus-disposing operations?" This was its answer, "The Commission believes the answer is an emphatic, 'Yes,' provided the necessary steps are taken to make possible and encourage such a development."

UTILIZATION RESEARCH AS A MEANS OF EXPANDING THE USE OF COTTON

Mason DuPre, Jr.
Southern Utilization Research and Development Division
Agricultural Research Service, USDA
New Orleans, La.

Cotton is consumed in more than 400 separate applications, which is several times greater than the number in which any other fiber is utilized. Although the total consumption of cotton has been rather stable during the past few years, there is a constant shifting in the quantities of cotton going into most of these hundreds of separate uses. In some uses, consumption is increasing, while in others, it is declining. There are many constantly acting forces that cause these changes in consumption, but one of the most influential is competition from man-made fibers and other products. In the long run, the fiber that maintains a competitive advantage in a combination of 2 or more of the 3 major factors of competition--quality, price, and sales-promotion -- eventually wins out.

The nature of this competition is exceedingly complex and is becoming even more so with the development of fabrics made from blends of two or more fibers. Although price is still, and will continue to be, a major factor in inter-fiber competition, consumers of today are willing to pay more for textile products of higher quality and products with special properties such as wrinkle-resistance, crease-retention, quick drying, etc. For example, many of the synthetic fibers that are higher in price are competing with cotton by virtue of certain special quality characteristics that permit special sales-promotion efforts.

Utilization research is the primary means by which the quality of cotton products can be substantially improved, especially as this relates to the imparting of special properties. Another effective means of improving the quality of cotton products is through breeding and production research to produce cottons of generally higher quality, and marked success has been attained through this approach.

In the United States, large-scale utilization research on cotton began in 1941 with the establishment of the Department of Agriculture's Southern Regional Research Laboratory in New Orleans. This laboratory is now one of several that are part of the Southern Utilization Research and Development Division of the Agricultural Research Service. The cotton research program of this laboratory is geared not only to improving the general level of quality and lowering the costs of cotton products, but also to transforming cotton into entirely new chemical fibers. These new fibers are designed to have special properties, including some of those possessed by synthetics derived from petroleum, coal, or wood, but at the same time to maintain the many good properties of the cotton fiber and to use the cotton fiber as the major raw material for their manufacture.

Utilization research on quality improvement can be classified in different ways. Perhaps the most useful for this review is to divide this type of research into two main categories: (1) That concerned with improvement in the general level of quality of all types of cotton products, and related primarily to uniformity, and (2) that concerned with enhancing selected, specific properties, such as wrinkle resistance, warmth, etc. At the Southern Regional Research Laboratory, the first type of quality improvement is approached primarily through mechanical-processing research and the development of testing instruments and testing methods, whereas, for the second type, the approach is primarily, though by no means exclusively, through chemical research.

Although this presentation will emphasize current and recent cotton utilization research developments at the Southern Regional Research Laboratory, references will also be given to some closely related earlier work. These developments have been grouped into three categories: (1) Physical properties of cotton fibers, yarns, and fabrics, and their interrelationships, (2) development of mechanical processing machinery, and (3) development of specialized quality characteristics in cotton products.

Although it is impossible to avoid completely the use of technical terms in describing the results of research, I shall try to keep to a minimum the use of technical terms, the meanings of which are not generally understood.

1. Physical Properties of Cotton Fibers, Yarns, and Fabrics, and Their Interrelationships

A knowledge of the physical properties of cotton fibers, yarns, and fabrics, and their interrelationships, is necessary not only for the effective utilization of cotton, but also for attaining high processing efficiency and assuring and maintaining uniform quality. The development and use of instruments to measure these properties is expanding rapidly, especially with regard to instruments for measuring fiber properties, where emphasis is being placed on high-speed and low-cost testing methods. Not only are the usual properties of length, strength, and fineness of cotton being routinely measured by instruments, but other properties, such as fiber elongation, degree of crystallinity, and crystallite orientation, are being studied in research laboratories to determine the extent of their usefulness in characterizing cotton. Tests on yarns and fabrics are becoming more and more concerned with basic physical properties such as elastic recovery, hysteresis, and modulus of extension, and their relationships to performance in service.

The widespread use of instruments for measuring the commercially useful properties of cotton has created a need for the maintenance of a uniform level of testing between different laboratories and within individual laboratories. An extensive interlaboratory check-sample testing program conducted in 1951 and 1952 showed there was very poor agreement among testing laboratories, and pointed to the need for using standard testing procedures and instruments, along with standard check cottons to equalize the level of testing. To this end, several public and private organizations in the United States have just recently put into effect a plan whereby standard samples of cotton, representing different certified values of strength and fineness, are now available to anyone at a modest cost, and some of these samples are already being used in Europe as well as in the United States.

Among the testing instruments developed by the Southern Regional Research Laboratory, and by other organizations conducting research under contract for the laboratory, are an instrument called the Stelometer for measuring the strength and elongation of bundles of cotton fibers in one operation; an instrument called the Neptometer for measuring the nepping potential of lint cotton rapidly, using small samples; a simple test known as Differential Dyeing for predicting the dyeing behavior of cottons and for estimating maturity; and a special technique and an instrument for determining the arrangement and size of void spaces in fabrics. Not only are these tests useful in manufacturing cotton products of higher quality, but some of them are also of aid to cotton breeders in their efforts to develop improved varieties of cotton.

It is generally recognized that the physical properties and service performance of cotton products are dependent on fabric and yarn structure and on the properties of the component yarns and fibers. Also, there is increasing evidence that fiber properties influence processing efficiency to a more significant degree than is commonly realized.

As an example of research in this latter field, studies beginning in 1951 have shown that many processing problems are encountered in spinning when fiber fineness is not properly controlled or considered. Other studies have shown that fiber fineness as well as length must be considered in determining the proper amount of twist to insert in roving, an intermediate product from which yarn is made to obtain optimum drafting efficiency during the spinning operation.

2. Development of Mechanical Processing Machinery

Research on mechanical processing machinery is concentrated on the development of new and modified machinery up through carding, primarily to improve the quality of cotton products, although some research is directed at other processes where opportunities also exist for aiding cotton competitively.

The first major commercialized development in this field was the SRRL Opener, a radically new type of machine developed several years ago that gives much better opening and blending, and permits better cleaning with less loss of spinnable fiber. Another commercialized development is a simple mechanical attachment for looms that permits an increase of up to about 30 percent in the normal number of filling yarns per inch in a 40-inch fabric, and gives fabrics that are highly resistant to the passage of air and water.

Current research is centered on a new type of cleaning system involving the use of two integrated units, one known as the Opener-Cleaner, and the other as the Carding-Cleaner. In experimental runs, cleaning efficiencies up to about 80 percent have been achieved with less than 1/2 the loss of fiber experienced with conventional cleaning lines. Engineering details of the Opener-Cleaner were released to the textile industry early in October 1957 and the machine is now commercially available from three manufacturers of textile equipment.

3. Development of Specialized Quality Characteristics in Cotton Products

A major part of the Southern Regional Research Laboratory's program is on the development of specialized quality characteristics in cotton products. The primary means of accomplishing this objective is through chemical treatments, but fabric design and the development of mechanical processing equipment to produce cotton fabrics with special properties are also effective means. This type of research is aimed at improving the performance of cotton products with respect to such properties as resistance to wrinkling, soiling, weathering, burning, etc., and other properties such as drape and tear strength.

One of the most interesting cotton research developments of the Southern Regional Research Laboratory is an application of the age-old process of mercerization, which was originally developed to impart better absorbency and dyeing properties and greater strength to yarns, and was later modified by Lowe to impart luster. By treating cotton fabrics with mercerizing strength caustic without tension, a highly resilient fabric can be obtained. One type that is now in commercial use is a conforming, nonslip cotton bandage that gives the desired protection without binding, and permits body-joint movements.

Several effective flame-retardant treatments for cotton, durable to laundering and drycleaning, have been developed, including one using a formulation of a chemical referred to in brief as "THPC". The THPC treatment is being used commercially in both the United States and England.

Another type of flame-retardant treatment that is highly effective at low add-ons and does not have the weakness common to most types of durable treatments--that of lower tear strength and some stiffening of the fabric--has been developed during the past year. This treatment uses a combination of THPC and another chemical known as "APO". A related chemical known as "APS" is also effective in this formulation. A successful run has just been completed on commercial equipment using a THPC-APO formulation.

One of the first commercial developments of the Southern Regional Research Laboratory is a method of fixing lead chromate in fabric that is used over fields of shade-grown tobacco. The durability is increased two or three times at a nominal added cost, and this development has helped cotton ward off displacement by synthetic fibers on which research is being conducted for this use. Millions of yards of this treated fabric are now in use. More recently, it has been found that acetylation, a type of chemical modification, of cotton fabric pre-dyed with selected vat dyes gives a product that is not only practically immune to mildew but also more than twice as durable to sunlight.

In the late development stage is a method for imparting permanent, or durable, creases to cotton garments using ordinary drycleaning equipment. Garments processed in this manner would also be wrinkle resistant and dimensionally stable. By this method, a resin is applied to garments such as trousers, sport shirts, and dresses, and the resin is then cured during or after pressing to give a permanently creased garment that can be washed and simply hung to dry, ready for the next wearing. Cotton garments of this type will have this additional "property" of permanent, or durable, creases, now possessed by similar garments made from some of the newer synthetic fibers, while retaining the comfort and attractive appearance of cotton.

Conclusion

There have seldom been spectacular gains in the consumption of cotton resulting from single utilization research developments, and it is difficult to measure with any degree of accuracy the effects of quality improvement research on the consumption of cotton. However, even though the effects cannot be accurately measured, it is reasonable to conclude, on a conservative basis, that as a result of quality improvement research by the Southern Regional Research Laboratory and others working in this field, the consumption of cotton is at least several hundred thousand bales higher today than it would have been without this research.

Large-scale utilization research on cotton is still really only in its infancy in relation to the opportunities provided by this type of research. Many of those who were quick to embrace synthetic fibers as the only fibers that will be used in the future are beginning to wonder how far off this future is. They are beginning to realize not only that cotton possesses a combination of more desirable properties than any other fiber, but also that as a result of research the future will see reductions in the price and further improvement in the quality of cotton and cotton products. The results of this research are placing cotton on a foundation of ever increasing competitive firmness.

CONCLUSIONS AND RECOMMENDATIONS

Work group on opportunities for developing a program to expand market outlets for grain, seed, cotton, and tobacco

In dealing with this topic, the group members had very little personal experience on which to base their conclusions. A breakdown was made as to points dealing with the expansion of: (1) Foreign markets, (2) domestic markets, and (3) both foreign and domestic markets.

Foreign

The Foreign Agricultural Service programs concerning foreign market development were endorsed by the group. It was recognized that these commodities must be able to compete both in price and in quality if exports are to be maintained or promoted.

A possibility for action by State departments of agriculture could be the exploration of how Foreign Agricultural Service work can or could apply to these given commodities. The initiative could be taken in promoting interest in export sales. To do this, the departments must first explore mechanisms for carrying out promotional work.

Cotton, wheat, and tobacco already have extensive foreign promotional work under way through commodity associations. State personnel could get people within their State, whether producers or businessmen, to cooperate to a greater extent with commodity organizations. This would be done by the dissemination of needed information and arousing interest through any contacts made in the discharge of regular duties. First, however, must come a closer acquaintance and working relationship with the commodity organizations.

Domestic

A wealth of information and research findings are available and should be channeled into the hands of persons or organizations who may utilize the data. This should increase efficiency, improve quality, and lower marketing costs, all of which serve to bring these commodities into a stronger competitive position for expanded market outlets. All agricultural agencies should cooperate in encouraging such use of utilization and marketing research findings.

Educational and promotional activities to expand domestic outlets should be encouraged within the States. Where such promotional activities would be less effective on a State basis, an alternative suggestion would be participation on a regional or national basis.

There is a need to improve quality standards now in use so that grades may reflect the true value of the product involved. State departments should endorse legislation and set up regulations to maintain and improve quality control while simultaneously promoting commerce.

Foreign and Domestic

State departments must provide the same services in maintaining the quality desired by ultimate consumers on either the domestic or foreign market.

For marketing work in general and market expansion in particular, specialized education and experience is essential to success.

Teamwork in application of findings of research, extension and marketing service workers to producers is absolutely necessary to increase returns through quality improvement.

No method or short cut has been found that will sell an undesirable low-quality product at a profit or to the satisfaction of the producer.

When we know what the trade wants, and produce the quality desired, the marketing process is a minor factor.

Too many in research, extension and marketing service work are concerned with who gets credit for increase, even though all are working for the same stockholders, the producers.

Close cooperation, with equal credit to all concerned, has resulted in quality improvement and increase in return of 4000 West Virginia tobacco growers, consistently for 8 years, and we believe this will continue indefinitely.

INFORMATION NEEDED TO IMPROVE GRAIN MARKETING

Robert E. Post
Agricultural Marketing Service, USDA

As I understand my job today, it is to introduce the assigned subject, "Information Needed To Improve Grain Marketing." I would like to proceed by going over the major economic factors that affect the supply-demand-price structure for grains. In later discussions, we may be able to decide whether we are making good use of existing information on these factors, as well as to indicate what additional information is needed in order to do a better job of marketing.

May I now call your attention to figure 1A, which deals with the factors that affect wheat supply, the total of which is shown as made up of the wheat carryover, current production and current imports. The size of the carryover is important in that in one single figure it indicates the overall wheat supply-demand balance up to that time. I will say more about this later. Imports are relatively unimportant, with quantities used for food limited by quota to less than a million bushels a year and quantities of feeding quality wheat held to relatively unimportant proportions. Acreage and yield, which determine the size of production, are both influenced by acreage allotments and marketing quotas. Acreage is also influenced by moisture at seeding time, prices of competing crops, and the price support rate. Yield is also influenced by weather, cultural practices, insects, and diseases.

You people gathered here are interested in supplies of wheat because quantity is so important to the marketing services of (1) transportation, (2) storage, and (3) processing.

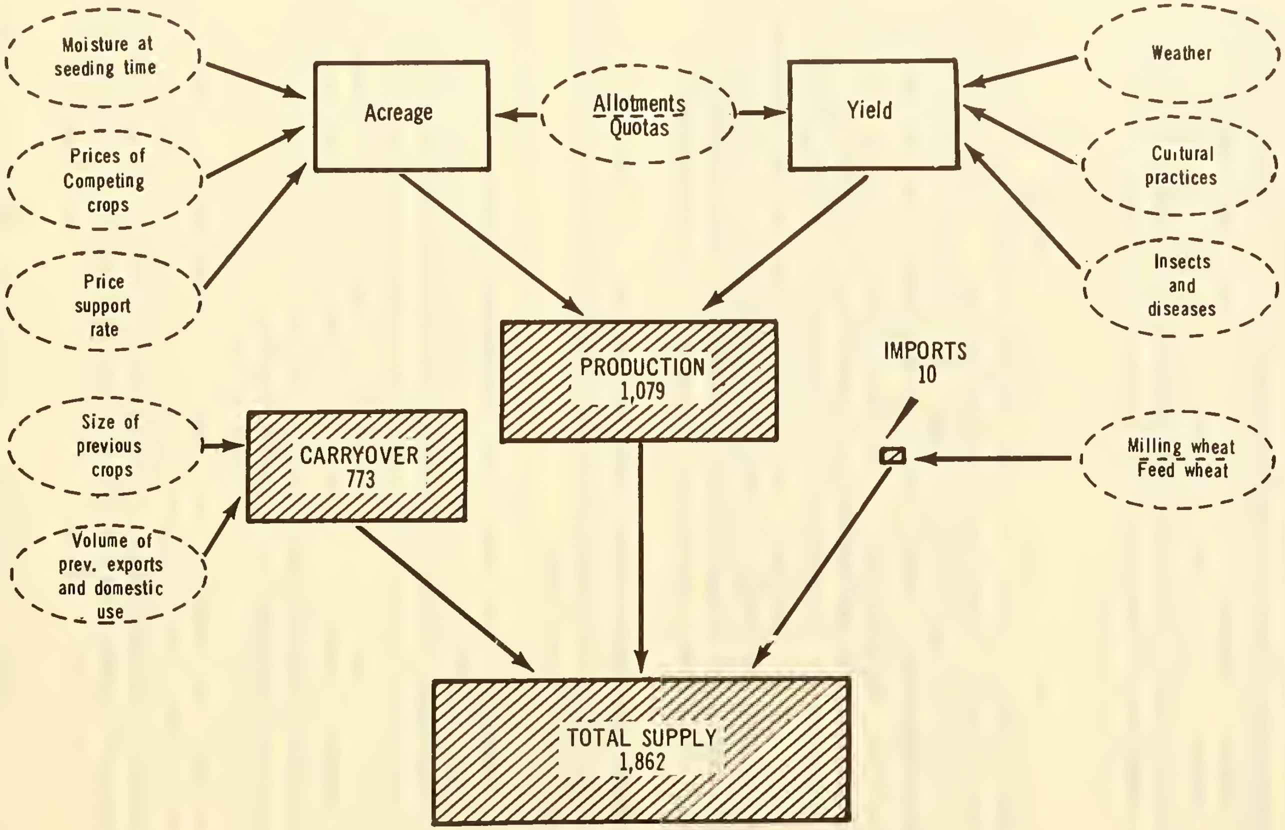
The job of transporting wheat, we recognize, has to do with bringing wheat from the many farms to centers for distribution and then to final destinations. Problems involved include shortages (or surpluses) of cars, trucks, ships, and port facilities--all important in doing a good job of marketing. Likewise, storage is concerned with supply, as we may have too much or too little storage capacity, especially when considered regionally or locally. Processing depends upon volume to do a low-cost-per-unit job. This also often becomes of regional or local concern.

Quality as well as quantity of wheat is important in relation to the supply. Marketing services that relate to quality include (1) grading and standardization and (2) selling. The first of these is necessary to the efficient selling of wheat, and only a recognition of its importance is required here. However, the service of selling deserves special attention.

Wheat is not a single commodity, but several, as you all know. Hard red spring and hard red winter wheats are suited especially to the making of bread flour. These wheats are relatively high in protein (this does not enter into grade determination), which provides the elastic gluten essential for the

FACTORS AFFECTING THE SUPPLY OF WHEAT

1952-56 Average in Million Bushels



ARROWS INDICATE DIRECTION OF INFLUENCE

U. S. DEPARTMENT OF AGRICULTURE NEG. 4604-57 (10) AGRICULTURAL MARKETING SERVICE

FIGURE 1A

best bread flour. The highest prices are usually paid for wheat of highest protein. However, in years in which a large part of the crop is of high protein, premiums are relatively low, whereas in years in which the crop runs low in protein, premiums are high.

Test weight is also an important quality factor in determining value, because it is indicative of the flour yield. Millers frequently like to purchase wheat from a particular area and as directly as possible from growers to get country-run uniformity.

Soft red winter and white wheat flours are used for pastry, crackers, biscuits and cakes. Highest prices usually are paid for softness of texture, a quality associated with low content of protein. Durum is used for making semolina, from which are made macaroni and spaghetti and related products. Some red durum is used to make breakfast food, but its main use is for poultry and stock feed. In recent years, the production of red durum has become relatively unimportant.

With entirely different end uses of the various classes of wheat, the marketing job becomes specialized. For example, supplies of soft red winter wheat in 1953-54 and the 2 years which followed were very large and prices dropped below the normal relationships with prices of hard wheats in these years. In 1957-58, however, supplies are relatively small so that the quantity available for export is only about a third of the quantity exported a year earlier. If the export market is active, soft red winter wheat prices should be independently strong later this year.

In the 3 years 1953-55, durum production was greatly reduced by rust; this resulted in independently strong prices for this type of wheat. Supplies of hard red winter wheat are very large at the present time and those of hard red spring are abundant.

Other marketing services which may be discussed at this point have to do with (1) selling over time, and (2) financing and risk taking. The question as to when to sell is asked much less frequently now than in earlier years. Since we have had the loan and purchase agreement programs, prices have usually been lowest immediately following harvest and have then advanced as the commercial supply was reduced by quantities placed under support. Since 1939, after the support programs became effective, it has been easier to say when the low point of the year will take place than when the high may be reached. In all of the last 18 marketing years, the monthly average cash hard winter wheat price was lowest in one of the 3 months June, July, or August. However, only in 11 of the 18 years have prices averaged highest in March or later. In other years, the highest prices occurred in December-January except in 1952, when prices averaged highest in November, and in 1950 when they were highest in February. With the later harvest in the spring wheat area, prices usually reach their lowest level later than prices do in the hard red winter wheat area. Prices by classes may behave differently because of the different supply situations.

The marketing service of financing and risk taking, while not ordinarily a critical factor, can become one under exceptional circumstances. For example, if marketing quotas were voted down and the loan rate to cooperators was thereby reduced, adequate financing of production and orderly marketing operations could become difficult.

So much for the discussion of supply and related marketing services. Now let us turn our attention to figure 1B. The upper part of this diagram shows the physical distribution of wheat. Here we see pictured the distribution of wheat for use in the United States for seed, feed, and food, and for export and carryout.

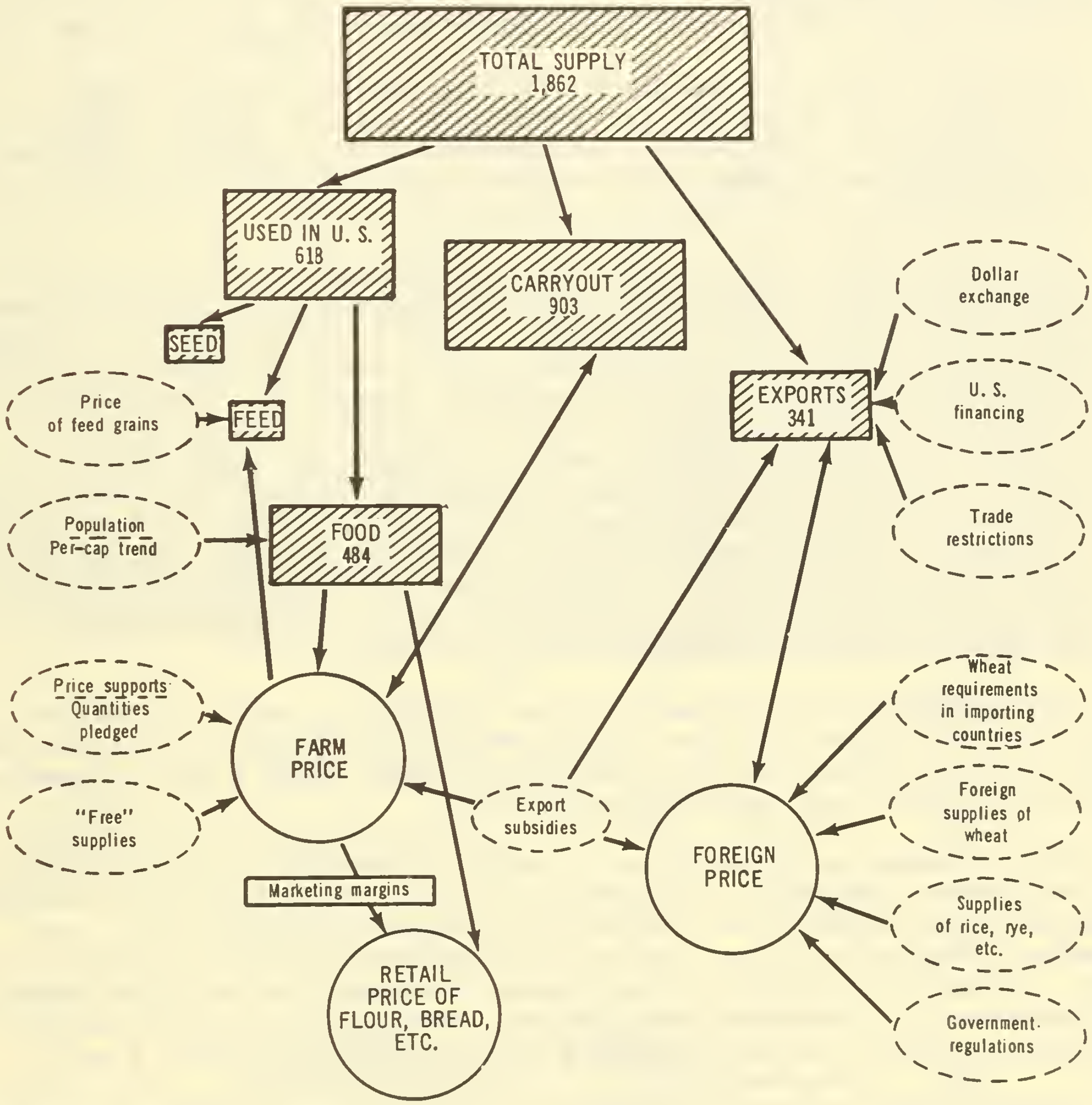
The size of the carryout, as already pointed out, is especially important in that it indicates the size of the surplus disposal problem, which is with us most of the time. It reflects the size of the previous crops and how adequate a job had been done in disposing of such production. In the past, we had two major outlets to which we could resort to reduce the wheat carryover. These were (1) by feeding, and (2) by exporting. Feeding of wheat has now become relatively unimportant because wheat prices are maintained by our price support programs above a competitive level with feed grain prices. In recent years, even the normal feeding of wheat on farms where grown has been cut in the commercial wheat areas by the decline in the number of farm poultry flocks. Unless we are willing to subsidize wheat prices for feeding, the export outlet is our only means of reducing large surpluses.

There appears to be little or no chance of increasing the total food use of wheat in the United States. Total food consumption of wheat is about unchanged from what it was half a century ago. The downward trend in per capita consumption has about offset the effect of the increase in population. The quantity used for seed varies with the acreage seeded, but this involves only a small year-to-year variation. Quantities used for alcohol and other industrial uses are negligible and are not shown. These could be increased only by a substantial subsidy to overcome the price advantage of other sources of starch.

Figure 1B provides an opportunity to go on from the physical distribution of wheat to economic and governmental factors involved in distribution. Prior to the time of farm price supports, domestic prices were explained principally by their relationship to Liverpool, the leading importing center. Prices at Liverpool were determined by world supplies of wheat and price level for all commodities, which served as a measure of world demand. As shown in figure 1B, with the inauguration of the price support programs in the United States, prices are now related to the support rate, the quantity placed under support, and the adequacy of the remaining "free supply." As already pointed out, prices are generally lowest in June, July, and August (below the effective support level). Then, as quantities are withdrawn from the general supply under the support programs, prices advance to a level which depends upon the tightness of the "free supply." Ordinarily, this is slightly above the effective support level. However, if the "free supply" is short enough, the price could rise either to a point where needed quantities placed under support by

DISTRIBUTION OF WHEAT, WITH RELATED ECONOMIC AND GOVERNMENTAL FACTORS

1952-56 Average in Million Bushels



ARROWS INDICATE DIRECTION OF INFLUENCE

U. S. DEPARTMENT OF AGRICULTURE NEG. 4605-57 (10) AGRICULTURAL MARKETING SERVICE

FIGURE 1B

growers are redeemed by growers, or where sales are made by CCC (loan plus carrying charges plus 5 percent). Changes in farm prices are reflected in the retail price of flour, and also to some extent in the price of bread, etc., although the price of wheat makes up only a small part of the retail price of these articles.

With the domestic price held above the price at which other surplus producing countries are selling their wheat, it becomes necessary, if we are to compete in world markets, to have subsidy payments equal to the difference between our supported domestic price level and the competitive export price level. During the last 3 years, this subsidy has averaged 76 cents per bushel.

As shown in figure 1B, the quantity of our exports is influenced by (1) dollar exchange, (2) United States financing of exports, and (3) trade restrictions. Foreign prices reflect (1) requirements of the importing countries, (2) foreign supplies of wheat, (3) supplies of rye, rice, etc., and (4) government regulations.

Now let us turn to the economic relationships in the commercial corn economy. The corn model differs from that of wheat in that prices are determined to a much greater extent by domestic factors, since exports represent a smaller proportion of total disposition. The number of livestock, including poultry, to be fed, and the rate of feeding per animal is a consideration of major importance in the case of corn, since normally about 75 percent of the corn crop is fed on farms where produced. In addition, 10-15 percent of the approximately 25 percent that does enter commercial channels eventually returns to farms as purchased livestock feed. Thus, about 90 percent of the crop goes into livestock. All uses other than feed, including exports, account for only about 10 percent of the crop. In recent years, substantial quantities of corn have gone to CCC under the price support programs; this has increased the percentage sold and reduced the percentage fed on farms.

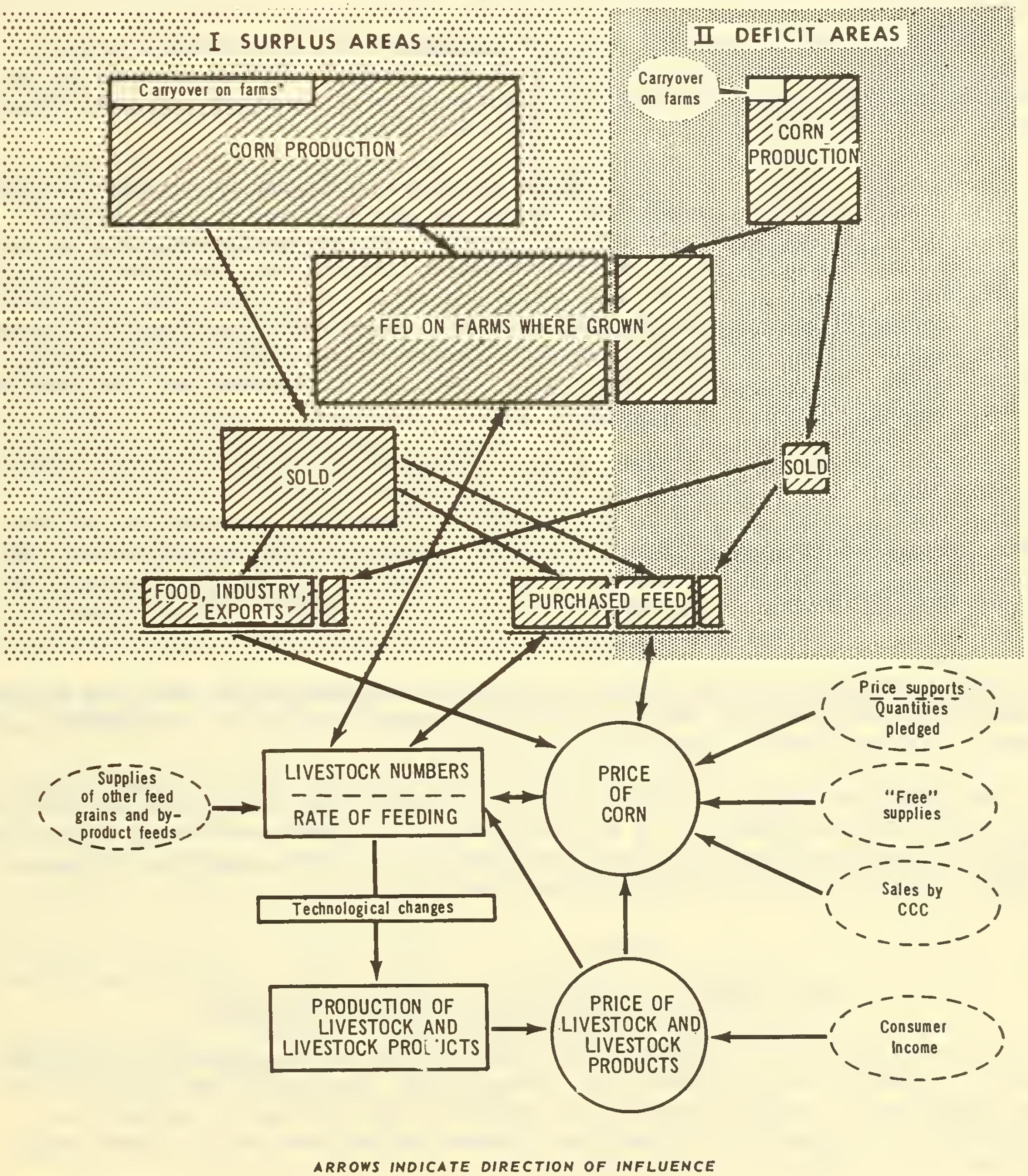
The commercial corn economy is shown in figure 2, which, at the top, shows the 2 major divisions: I - the surplus areas, which represent primarily the commercial corn States, and II - the deficit areas, which depend at least in part on shipped-in corn and other feed grains.

The rectangles have been drawn to scale to represent relative quantities, and the relative importance of production in I as contrasted with production in II is clearly brought out. In the next lower divided rectangle, the tremendous proportion of the crop fed on farms where the corn is grown is indicated. In the next 2 layers of rectangles, the quantities sold are shown, and the proportion (1) going for food, industry, and exports, and (2) purchased for feed, are shown, divided according to whether purchased from I or II.

Factors which influence the price of corn are shown by arrows pointing toward the circle in the lower center of the diagram. Important factors in the general level of corn prices, as in the case of wheat, are the level of price supports, quantities pledged, and the relative adequacy of the remaining

ECONOMIC RELATIONSHIPS IN THE COMMERCIAL CORN ECONOMY

Rectangles Drawn to Scale Represent Relative Quantities



ARROWS INDICATE DIRECTION OF INFLUENCE

U. S. DEPARTMENT OF AGRICULTURE NEG. 4606-57 (10) AGRICULTURAL MARKETING SERVICE

FIGURE 2

"free supplies." In the case of corn, the price level for the season is related to the loan rate. However, a considerable degree of the seasonal behavior of corn prices is also influenced by (1) number of livestock to be fed and the rate of feeding per animal unit; (2) sales of corn largely from I but also from II; (3) prices of livestock and products; and (4) demand for food, industry, and export. In a number of recent years, particularly in 1956-57, CCC sales of corn also have been a price influencing factor.

It should also be pointed out that the price of livestock and products is influenced by (1) production of livestock and products (which in turn is influenced by animal units fed and feed per unit); (2) consumer incomes and (3) production of livestock and products in other areas.

Models for barley, oats, and grain sorghums have much in common with that of corn, and prices are largely influenced by the behavior of corn prices since it is relatively so much more important. The marketing of rice for many years has been closely tied in with Government programs and regulations, both in the United States and other important exporting as well as importing countries. The price of rice in the United States at present is largely determined by the support rate, and quantities, not finding other markets at about the support, move into Government ownership. Then the Government has the problem of disposing of the excess supplies.

In the foregoing discussion, I have attempted to cover the broad subject of grain supply and distribution, touching on the physical, economic and governmental factors related to marketing. Information covering the various items are generally available on a national, regional, and State basis. In the discussion to follow, information on sources and information needed, but not now available, may be brought out--all of this with a view of doing a better job of grain marketing.

While the factors that I have presented are numerous, as you have no doubt already concluded, at any one time certain factors loom up as overshadowing all others, thereby greatly simplifying analyses.

The time has been too short for me to do more than scratch the surface of the subject matter involved. I am sure that in at least some cases I have been guilty of oversimplifying complex relationships. I have, however, tried to provide a general introduction for the discussion.

Representative Publications In Grain Marketing

The following are representative publications in the field of grain marketing. A sample copy of each publication is on display at the front of the room (numbered to correspond with the numbering on the list), and may be examined at the close of the session. Please do not take any of these until everyone has a chance to look them over.

In the list which follows, those marked "A" may be obtained by addressing: Publications, Office of Information, U. S. Department of Agriculture, Washington 25, D. C.

Those marked "B" may be obtained by writing to: Marketing Information Division, Agricultural Marketing Service, U. S. Department of Agriculture, Washington 25, D. C.

Wheat

1. Wheat, A Food Grain - 1954 Yearbook of Agriculture, Separate No. 2556. (B)

2. Distribution of the Varieties and Classes of Wheat in the United States in 1954 - Agricultural Handbook No. 108. 1957 (B)

3. The Demand and Price Structure for Wheat - Technical Bulletin No. 1136. 1955 (A)

4a-4c. The Wheat Situation - Published five times a year by Agricultural Marketing Service, USDA (A)

5. Wheat Market Summary - quarterly - USDA, Agricultural Marketing Servie, Grain Division, Minneapolis 1, Minn.

Rice

6. Rice Production and Marketing in the United States - Miscellaneous Publication No. 615. 1947 (A)

7. Rice Production in the Southern States - Farmers' Bulletin No. 2043. 1952(A)

8. Southern Rice - Annual Market Summary. 1957 - Agricultural Marketing Service Publication No. 213. 1957 (B)

9. Consumer Research and the Rice Sales Export, address by O. V. Wells, Administrator, Agricultural Marketing Service. 1957 (B)

10. Domestic Distribution Pattern for Rice, a Preliminary Report - Agricultural Marketing Service Publication No. 193. 1957 (B)

11. The Rice Situation - RS-1, 1956. To be published once a year by Agricultural Marketing Service. (Next issue for release on December 23, 1957) (B)

12. Rice Market News - weekly - USDA, Agricultural Marketing Service, Grain Division, New Orleans 12, La.

13. Rice Mill Yield and Grade - In Relation to Variety and Method of Harvest, by M. W. Slusher and Troy Mullins - Agricultural Experiment Station, University of Arkansas College of Agriculture, Fayetteville, Ark., Bulletin 526. 1952.

Feed Grains

14. Feed Grains - 1954 Yearbook of Agriculture, Separate No. 2555. (B)

15. The Demand and Price Structure for Corn and Total Feed Concentrates - Technical Bulletin No. 1061. 1952 (A)

16. The Demand and Price Structure for Oats, Barley, and Sorghum Grains - Technical Bulletin No. 1080. 1953 (A)

17. Costs of Storing Reserve Stocks of Corn - Marketing Research Report No. 93. 1955 (B)

18. Losses from Shrinkage and Quality Deterioration of Corn Stored in Country Elevators and at Bin Sites in Iowa - Agricultural Marketing Service Publication No. 173. 1957 (B)

19. Losses from Quality Deterioration and Shrinkage of Corn Resealed on Iowa Farms - Agricultural Marketing Service Publication No. 166. 1957 (B)

20a-20e. The Feed Situation - Published six times a year by Agricultural Marketing Service. (B)

21. Feed Market News - weekly - Agricultural Marketing Service, Grain Division. (B)

22. Feed Market Review - weekly - USDA, Agricultural Marketing Service, Grain Division, Minneapolis 1, Minn.

23. Corn Market Summary - quarterly - USDA, Agricultural Marketing Service, Grain Division, Kansas City 6, Mo.

24. Possible Methods of Improving the Feed-Grain Program - Senate Document No. 55 - 85th Congress, 1st Session. 1957 -- Available from Office of Budget and Finance Division of Legislative Reporting, United States Department of Agriculture, Washington 25, D. C.

Grains in General

25. Grain Production and Marketing - Agricultural Marketing Service, Miscellaneous Publication No. 692. 1949 (A)

26. Grain and Feed Statistics Through 1956 - annual - Statistical Bulletin No. 159. 1957 (B)

27. Grain Market News - weekly - Agricultural Marketing Service, Grain Division (B)

28. Grain Market Review - weekly - USDA, Agricultural Marketing Service, Grain Division, Chicago 7, Ill.

29. North Central States Grain Warehouse Regulations, by Stanley W. Philips - Agricultural Experiment Station, Kansas State College of Agriculture and Applied Science, Manhattan, Kans., Bulletin No. 375. 1956

30. Reserve Levels for Storable Farm Products - Senate Document No. 130 - 82d Congress, 2d Session. 1952 (B)

ADEQUACY OF COTTON STATISTICS FOR EFFICIENT MARKETING

Fred P. Johnson
North Carolina Department of Agriculture

American cotton is produced in 19 States of the Union.

Cotton textile manufacturing extends from the New England States to the Southwest, with the heaviest concentration in the Southeast. Prior to the establishment of production controls and price supports by congressional action, world conditions, including American and foreign production forecast and supply estimates, were major factors affecting domestic and foreign prices of raw cotton. The spot and futures markets were highly sensitive to supply forecasts. With existing surpluses and the many new factors affecting the disappearance of American cotton, market prices reflect congressional action and national policy as well as the normal functioning of "supply and demand."

With burdensome surpluses and the costly disposal of excess production, quality statistics are becoming more and more important as a price factor. Color, staple length, trash content, and ginning are the quality specifications determining price differentials for the 336 combinations of grade and staple length eligible under the 1957 loan program. Loan prices range from 16.24 cents to 41.89 cents.

In addition to the 336 qualities recognized by the Government, the trade frequently asks for "split grades" and uses widely assorted definitions of "character" in its effort to appraise spinning qualities.

Market information for the raw cotton industry may be classified as (1) information for producers and (2) information for initial consumers. Naturally, the marketing interests are concerned with all market information.

General market information for producers includes (1) production forecasts, domestic and foreign, (2) estimates of domestic and foreign supplies, (3) monthly and annual releases of consumption data, (4) price trends, and (5) the level of activity in the textile industry. This class of information, under normal conditions, contributes to the orderly marketing of cotton by providing some leads as to selling or holding. Although the average farmer is unqualified to use this type of information, he is influenced by prevailing opinion as reflected by the press, agricultural leadership, and other sources of information.

Specific information for producers includes (1) bale-by-bale classification as provided by the U. S. Department of Agriculture, (2) daily and hourly Cotton Exchange reports, (3) spot prices as related to the futures market, (4) location differentials, and (5) the specifications determining the class of each bale. Although the farmer sells on a buyer's market, this class of information, most of which is found in "Farmer's Weekly Cotton Price Report," released by the U.S. Department of Agriculture, should enable him to determine the extent to which grade values and prevailing prices are reflected by his local or retail market.

Market information for consumers (spinners) includes (1) the general information for producers with respect to forecasts and estimates, (2) analyses in great detail of world textile activities, (3) progress in the promotion of cotton consumption, (4) the competitive position of cotton end products, (5) international trade relations, and (6) trends in the domestic economy.

Market information for raw cotton consumers on a bale-by-bale basis has to do with the procurement of cotton for specific end uses. Although merchantable lots may vary in size, each bale is selected on definite specifications including (1) grade, (2) staple length, (3) variety and year of growth, (4) fiber fineness, maturity, and tensile strength. Even spinning test results for areas, varieties, and years of growth are considered in the selection of cotton to meet individual mill requirements.

Over the years, production conditions and gin service have contributed to the establishment of quality reputations for areas of production as small as counties and communities. Obviously, this type of market information cannot reflect variations in fiber properties from year to year and throughout each harvesting and ginning season. It is mentioned just to emphasize the long-standing need for some means whereby certain fiber specifications may follow each bale through the marketing channel from gin to mill.

Within the past decade, research on cotton properties has developed laboratory tests whereby fiber fineness, strength, maturity, and length uniformity may be established with a fair degree of accuracy.

Although fiber properties have not become a price factor along with grade and staple length, their importance is reflected in the prices mills pay to procure their special requirements. Laboratory test results released to the trade and mill consumers reduce marketing costs by spotting the areas and localities where given combinations of properties may be found.

Conceivably, the potential use of laboratory test results may prove to be the final step in the one-time identification of cotton as it moves from gin to mill.

The foregoing statements are presented in support of our conclusions that (1) existing cotton statistics meet the needs of the raw cotton industry for statistical information, (2) statistical information is secondary in the efficient marketing of raw cotton, (3) the primary need in marketing raw cotton is permanent or one-time bale-by-bale identification of grade, staple length, variety, area and year of growth, and the fiber properties of fineness, tensile strength, length uniformity, and maturity.

Progress toward bale identification includes (1) Government classing service, (2) Micronaire(fineness) readings on class cards from two U. S. Department of Agriculture classing offices in Texas, (3) Micronaire readings on gin tickets by one Texas gin, (4) release of fiber test results by the North Carolina Department of Agriculture on cotton from 27 ginning points in the State, (5) private laboratories of cotton shippers, (6) mill laboratories, (7) release of spinning test results on areas and varieties by the U. S. Department of Agriculture.

As bale identification develops, the cotton marketing channel will be shortened and marketing costs reduced.

ADEQUACY OF TOBACCO STATISTICS FOR EFFICIENT MARKETING

J. H. Cyrus
North Carolina Department of Agriculture

1. Kind of Statistical Information Needed

In order to market efficiently tobacco of the various classes and types, a wide range of statistical data and market information is necessary. The kind of statistical information needed is essentially the same for all types of tobacco, especially the types sold through the loose-leaf auction system.

The information needed for efficient marketing can be broken down into four separate areas surrounding the market. The areas of information are: (1) Production estimates, (2) stocks, supplies and disappearance, (3) industry situation data, and (4) market price information. The different areas of information are not directly related to each other, but a summary of this information is necessary in order to get the whole picture of the market situation.

The major information needed from each of these areas is as follows:

(1) Production Estimates

a. Indicated acreage with comparison of previous year and average over a period of 10 years.

b. Indicated yield per acre with comparisons for previous year, and 10-year average.

c. Indicated production with comparison for previous year and 10-year average.

These production estimates should be given according to types of tobacco, or production areas. Crop estimates are essential to any marketing program, in order to get a general idea as to the volume to be sold.

(2) Stocks, Supplies and Disappearance

a. Stocks of the various types of tobacco at the beginning of the market year, and a breakdown of the types into grade groups.

b. Supplies at the beginning of the market year, which includes stocks plus the estimated new crop.

c. Disappearance, which includes the total of domestic use and exports.

The level of stocks, supplies, and trends in disappearance has a direct effect on the marketing of any type of tobacco, and is essential information to efficient marketing.

(3) Industry Situation Data

a. Cigarette and other tobacco products, production and consumption data needed.

b. Changes in consumer preference.

c. New developments and processes in the industry.

The situation and developments in the tobacco industry probably have more effect on the market than any other factors, and such information is vital to the marketing of all types of tobacco.

(4) Market Price Information

a. Daily market price reports by types and standard grades, showing support price for each grade for types sold on loose-leaf auction markets.

b. Daily press release of market prices on grades making up bulk of sale, made available in the afternoon of the sale day, so that it will be current news.

c. Weekly market price report, showing weekly averages by grades.

d. Also desirable is a daily report showing gross sales, value, and average price for the individual markets of the various types.

e. Monthly summaries of producer sales and average prices by market, with comparisons for the same period of the previous year.

In order to operate any auction market efficiently, it is necessary to have current market price information.

2. The Availability of Needed Information

Fortunately, the availability of most of the statistical information needed for efficient marketing of the various types of tobacco is abundant. All of the information listed above as being desirable for efficient marketing is available in one form or another. However, there is a possibility that the accuracy of some of the data could be improved. The information available on the industry situation is not as complete as in some of the other areas of interest, but enough information can be pieced together to get a fair picture of the situation.

3. The Sources of Information

With such a broad scope of statistical information on tobacco, it is understandable that the information must stem from several specialized groups.

The sources of the statistical data and information needed for efficient marketing are as follows:

(1) Production Estimates.--Compiled by the Crop Reporting Service of various States.

a. In North Carolina, the first crop report on tobacco is made on July 1, and a report is made each month through the first of December, the December report being a preliminary final report for the season. A revised production report is issued the following May.

b. The monthly crop estimates carry tobacco by types, showing estimated acreage, yield per acre, and total production with comparisons.

c. This information is then compiled into an annual North Carolina statistical report.

d. The production estimates made in the various States are supplied to the USDA Crop Reporting Board, and a monthly Tobacco Crop Summary for all States is issued by the USDA.

(2) Stocks, Supplies and Disappearance

a. Tobacco Stocks Report.--This is published quarterly by the USDA Tobacco Division, shows inventories of all types of tobacco separately, also breaks the stocks down into grade groups.

b. Shows total supplies(carryover plus new crop) for various types.

c. Also disappearance data are given for all types in the Tobacco Stocks Report.

d. A more detailed report of domestic use and exports is available in the Tobacco Situation, issued quarterly by the USDA, Agricultural Marketing Service.

(3) Industry Situation Data

a. Data giving production and consumption of cigarettes and other tobacco products are made available by the Agricultural Marketing Service, USDA, in their quarterly report of the Tobacco Situation.

b. Statistical information relative to changes in consumer preference, such as the shift from nonfilter to filter-tip cigarettes, comes primarily from the Wooten Report and from Federal revenue departments.

c. Information on new developments and processes in the industry is very limited, due to the secrecy of manufacturers in guarding these developments. However, by piecing together bits of information, and by analyzing other available data, valuable marketing information has been gained, such as:

(a) Use of processed leaf, which includes the use of stems and scrap, which has reduced the requirements of manufacturers for certain types of tobacco, especially flue-cured, burley, and cigar tobacco.

(b) New methods of packaging, such as putting cigarettes into flip-top boxes, which reduces the length of a king-size cigarette from 85 mm to 80 mm. This reduces the amount of tobacco in many filter-tips to less than the amount in regular nonfilters.

(4) Market Price Information

a. Supplied by USDA Tobacco Division, cooperating with State departments of agriculture or other State agents.

(a) Daily price reports for flue-cured, burley, and Maryland types, showing auction average and support price by grades.

(b) Weekly price reports are issued for all types sold on loose-leaf auction markets.

(c) Also, in flue-cured this year, a Daily Gross Sales record was issued, showing pounds sold, value, and average price by markets for the different types.

b. In addition to this, most States issue either a weekly or monthly tobacco warehouse sales report, showing the producer sales and average prices by markets for the various types, with comparisons for the same period of the previous year. North Carolina also issues an annual tobacco report.

c. Then, at the end of the season, all of these data from the various States are summarized in the Tobacco Market Review, prepared by the USDA Tobacco Division, according to the different classes of tobacco.

4. Conclusion

After all of the statistical data and market information have been made available from the various States, the USDA, Agricultural Marketing Service then compiles the Annual Report on Tobacco Statistics, which is a summary of all tobacco statistics.

Tobacco probably has the most thorough coverage of statistical data and market information of any farm commodity sold in the United States. Therefore, if the available information is properly analyzed and used, it should be adequate for efficient marketing of tobacco.

CONCLUSIONS AND RECOMMENDATIONS

Work group on marketing information needed in a program to improve marketing of grain, seed, cotton, and tobacco

This group recognizes that a great deal of statistical information and analysis, needed to improve marketing, is already available to State agencies through Agricultural Marketing Service and other governmental sources. In most cases, fuller use and dissemination of available information by State agencies would improve local marketing conditions.

The following are areas where additional information is needed:

1. Current market prices in local areas on grain, seed, cotton and certain types of tobacco that are not already covered by daily market price reports.

2. Analyses to show the correlation between production factors and quality. An example would be a study of the relationship of factors in cotton production and cotton fiber fineness and tensile strength.

3. More State outlook information should be developed and distributed to producers and others interested in marketing grain, seed, cotton, and tobacco.

INCREASING RETURNS TO TOBACCO FARMERS IN WEST VIRGINIA THROUGH QUALITY IMPROVEMENT

Charles E. Campbell
West Virginia Department of Agriculture

The discovery that tobacco could be successfully grown and profitably sold was the most momentous economic fact in the history of Seventeenth-Century Virginia. It solved the colonial problem of finding a satisfactory product to be sent to the Mother Country, England, in exchange for the necessities of life not available in the new land. Tobacco saved the Jamestown Colony from extinction and starvation, since the colony was founded on expectation of production of silk, gold, iron, and other products which proved to be only illusions of the settling colonists.

In addition to its importance as an article of commerce between the colony and the Mother Country, tobacco became an article of trade between the colonists and the Indians, who early found that varieties of tobacco grown at Jamestown were superior to the native tobaccos grown by the Indians.

From the beginning made by John Rolfe in 1608, the production of tobacco became the ruling passion at Jamestown, and the history of the struggles with periods of surpluses, low prices, and attempted restriction of production, coupled with the slow evolution of marketing methods, is among the most important chapters in American agricultural history.

Contrary to popular opinion, the tobaccos in common use today are not what the settlers found growing in the Indian Villages along the James, Rappahannock, and other rivers of tidewater Virginia, where most of the tobacco was originally grown. The native tobacco grown by the Indians belonged to the species Nicotiana Rustica, which is believed to have originated in Mexico. The tobaccos grown by John Rolfe and the Jamestown settlers belonged to the species Nicotiana Tabacum, which is believed to have originated in Brazil and was commonly grown in South America and in Yucatan, in Central America.

Seed of the species Nicotiana Tabacum was introduced into Europe by the earliest Spanish explorers. Tobacco was already widely cultivated in the Spanish colonies when Jamestown was settled, and was being grown in many of the European countries. The English colonists learned the milder, more aromatic species Nicotiana Tabacum were superior to the less agreeable Nicotiana Rustica, and obtained seed from Spanish explorers for planting in the colonies.

When the pioneers pushed the frontiers westward to the new Northwest Territory, tobacco was produced in what is now West Virginia, and in Ohio River counties of Kentucky and Ohio. It was soon learned that the production of tobacco was limited by factors that contribute to quality and characteristics, by which profitable production was measured, and even then, production became highly localized in suitable areas.

The factors that contribute to quality and characteristics, by which present different types of tobacco were differentiated to meet the demand of changing market conditions, are:

(1) The character of the soil, (2) the climate in which tobacco is grown, (3) varieties of seed, (4) methods of cultivation, fertilization, and harvesting, (5) methods of curing (air curing, flue curing, fire curing), (6) methods of marketing.

The association between soil, seed, climate, cultural and harvesting practices, and curing processes is so close and has such a determining effect upon the type produced in any locality that the duplication of any type in a new environment is impossible; thus, we have flue-cured types produced in North Carolina, Virginia, South Carolina, Georgia, and Florida, fire-cured types in Virginia, Western Kentucky, and the Tennessee Counties bordering on Western Kentucky, and air-cured types in Maryland, Kentucky, Ohio, Indiana, Tennessee, western Virginia, western North Carolina, West Virginia, and a small area in Missouri.

The production in West Virginia is limited to nine counties in the southwest corner in the Huntington market area. While West Virginia has produced and sold tobacco longer than any State other than Virginia, existing records indicate that, on sales from 1866 to 1949, inclusive (83 years), farmers of the State received $880,000 less than the average price paid for all Burley tobacco marketed in the same period.

Between 1943 and 1949, I was assigned to the Huntington market 4 years as a tobacco inspector for the Tobacco Branch, United States Department of Agriculture, and found the tobacco so mixed and poorly prepared for market it was impossible to apply specifications for standard grades that were indicative of the true quality of the tobacco. The late Commissioner of Agriculture J. B. McLaughlin spent much time at the market in an effort to improve the position of his growers and together we had lengthy night sessions and conceived a program that it was hoped would give the growers information and advice to improve their position, increase their returns for tobacco, and recover the $880,000 they had lost.

Since no agency in West Virginia had knowledge of production and marketing of Burley tobacco, in 1949, when market research and State funds became available, I resigned from the USDA and started the program hoping to solve the problem. A cooperative agreement was made with West Virginia Agricultural Extension Service by the West Virginia Department of Agriculture to furnish my services with extension agents in the nine counties to promote a program of on-the-farm demonstrations of all the phases of production, including:

(1) Seed varieties, (2) plant bed preparation and management, (3) soil management, fertilizing, and transplanting, (4) insect and disease control in the plant beds and in the field, (5) cultivation, (6) topping and suckering, (7) priming, (8) curing, (9) conditioning, bulking, stripping and sorting, and preparation of tobacco for market.

Fifty farms in the nine counties were selected for the demonstrations, where group meetings were conducted as the seasonal phases developed. Soil samples from each demonstration farm were analyzed and soil types and crop histories recorded, and each year when the crops from these farms were marketed, samples of all grades of tobacco produced were taken and analyzed for nicotine and total alkaloid content, general characteristics, and burning qualities. Records were kept of all practices of all phases of production and returns from marketing on each demonstration farm, and reports summarized and compared to determine the results of recommended practices with various varieties, various soil types, and in the widespread area of nine counties. Summaries were furnished all companies who purchased tobacco on the West Virginia market.

In the same year (1949) the West Virginia legislature passed an act that placed all public markets dealing in livestock and agricultural and horticultural products under regulation and supervision by the State (Section 2, Article 2A, Chapter 19, of the Code of West Virginia). After completing the work on production, I was assigned the duty of Supervisor of Sales on the Huntington Tobacco Market. This assignment provided opportunity to assist and advise all tobacco growers on all the phases of marketing, including proper packing, arranging for sale, grading, and selling. Since 99 percent of West Virginia's growers market their crops at Huntington, this service was available to all of them.

It has been recognized by all manufacturers' representatives on the market that the greatest improvement in Burley quality in the district has been at Huntington and their favorable acceptance has resulted in increased returns in the amount of $554,342 more than the average price paid for all Burley tobacco marketed in the 8 years of the program's operation.

The slow evolution of tobacco marketing methods and practices continues as it has since the beginning at Jamestown. Tradition and tobacco marketing are synonymous, yet when so-called radical modern methods and practices are undertaken, they are acceptable to buyers and profitable to the sellers in West Virginia.

With a fine crop ready for marketing this season, to start the last week of November, it is hoped the greater part of the balance of the deficit of 83 years will be recovered, and at least in 1958 it will be completely recovered. If this program in 10 years recovers the deficit of $880,000, we know the effort and expenditures will continue to pay dividends to West Virginia growers for many years, and the methods may be valuable on other agricultural products that are in the same position tobacco was in 10 years ago.

PROCEDURES USED TO PRESERVE AND IMPROVE GRAIN QUALITY IN VIRGINIA

W. L. James
Virginia Department of Agriculture and Immigration

In Virginia, we produce many grains, but in small amounts as compared to other States. The grains that are produced for market include red winter wheat, both yellow and white corn, soybeans, barley, and oats. This discussion will concern work pertaining to the marketing of these grains that has taken place since 1948.

At the present time, we have approximately 23 marketing and grading centers operating in Virginia. These centers' primary function is to grade grain. They grade both incoming and outgoing grain. This enables the grain handlers to operate on a very small margin, and both the handlers and farmers to buy and sell on a graded basis. Feed manufacturers can receive a uniform quality of grain, which enables them to get the quality they pay for and have a better quality control in their feed. These centers not only are able to grade and classify grain, but are able to give additional information concerning the grain. All but two of the centers grade grain at the producer level. The personnel in these centers are in contact with many farmers.

In the Shenandoah Valley, where part of Virginia's wheat is grown, we have had one marketing center at a small country storage each harvest since 1949. This storage buys and stores approximately 100,000 bushels of wheat. In 1949, approximately 80 percent of the wheat contained garlic; 40 percent contained nematodes; the test weight ran from 52 to 57 pounds per bushel, and the dryer at the storage ran 24 hours per day during harvest. The wheat harvest time began about July 5. For the past three seasons, at this elevator the first wheat arrived June 24-25 and most of the wheat is harvested by July 10. About 40 percent of the wheat contains garlic. There have been no nematodes the last 3 years. Very little wheat comes in with less than 58 pounds test weight, and during the last 3 years the dryer has dried less than 10,000 bushels of wheat.

This improvement was accomplished by informing the farmers of the causes of the low quality and what they could do to eliminate these causes. Farmers producing wheat containing garlic and nematodes were advised to buy new seed. If the garlic was scattered over the farm, they were advised to spray for the garlic. Some farmers even had their children going through the wheat fields pulling up the immature garlic plants. The farmers having nematodes purchased new seed and sowed wheat on ground that had not been in wheat for 3 years. In this area, as most of the other areas, the farmers were harvesting their wheat too late. They were harvesting after the wheat had died. In Virginia there usually are about five or six days during the ripening period of wheat. That is the period when the wheat should be harvested. If it is harvested then, a wheat with a high test weight, low moisture content, and low damage content is obtained. Farmers are informed through county agents, radio, and newspapers of the proper time to harvest.

Through these centers, work is done with machinery dealers and demonstrations are held in the producing areas prior to harvest showing how harvesting machines should be adjusted to give the best quality grain. Farmers are able to get the latest price quotations, information on farm storage, and fumigation of weevil from these centers. Free checks for weevil and moisture are available to farmers who desire this service.

These centers are operated on a paying basis. Fees are collected on each lot that is graded for marketing. The services rendered other than the inspection of the grain would justify the cost of these centers.

We have several new grain-handling facilities in Virginia. These facilities are located in the corn and soybean producing areas. All the handling facilities are equipped with grain dryers. Because of these dryers, farmers are able to harvest and market new corn early enough to receive part of the old corn market price. There have been adjustments that had to be made in this type of operation. Handlers in the beginning dried the corn too fast and did not cool or condition the corn to outside temperature after drying. This caused the corn to go out of condition in a very short time. Now all the handlers are drying the corn at a slower rate and, after drying, they condition it before shipping it out, and only a small amount of the corn goes out of condition after it has been dried. One handler is using his aeration system to aid in the processing of corn. Wet corn waiting to be dried is placed in a bin that is being aerated. Air is drawn through this corn, which keeps it cool and sweet. After the corn is dried, it is again placed in an aerated bin to be cooled. After it has been placed through these processes it can be handled or stored with a minimum of risk.

These handlers are equipped with platform scales, dump pits, dump hoists or drag scoops, and good out-loading facilities for both carlots and trucklots.

Only 4 new storages have been constructed in the past 10 years, but several elevators have added additional storage to existing facilities. Some of the older facilities had bins constructed of wood, which were discarded when the new metal or concrete bins were built. These new bins enable grain to be kept free of weevil and rodents. In the older structures, it was nearly impossible to fumigate the grain properly or to keep the rodents away from the grain. All but four of the larger storages are equipped with grain dryers. These dryers enable farmers to market or store grain that has been harvested with excess moisture.

Assistance has been given all these storages concerning improper storage and handling practices. Now storages without aeration turn and fumigate, if necessary, at given intervals. This has caused the quality of the grain to remain the same as it was when put in storage. As late as 1953, most of the elevators would let the wheat "bin burn." This caused a condition which is known as "sick" wheat. The wheat rises in temperature only a few degrees, causing mold growth to take place. This causes the germ of the wheat to die and discolor, making it a damage factor when graded for quality.

In the Shenandoah Valley, farmers are keeping grain on the farm properly. This can be done when an adequate storage is provided. Good, tight, wood or metal storage bins that are rodent-proof and can be properly fumigated are adequate if the farmer has good, storable grain to place in these bins. The grain should be dry, sound, and of a good grade before it is placed in farm storage. If it is watched carefully and fumigated when weevil are present, the farmers are able to keep the grain as good as a commercial storage can.

The work that has been done in Virginia to improve grain quality has been in cooperation with the Extension Service and with farmers, grain handlers, and elevator operators.

Approximately 20 color slides will follow. These slides will include maps showing the location of the grain dryers, the feed and flour manufacturers, and the inspection centers in the State. There are also slides showing some of the facilities in the State and some of the equipment used in these facilities.

CONCLUSIONS AND RECOMMENDATIONS

Work group on how returns can be increased through quality improvement work on grain, seed, cotton, and tobacco

The following recommendations were reached as a result of discussion of the topic by the workshop group:

1. There is a need to develop and expand programs on the recognition and understanding of grades and standards for grain, seed, tobacco, and cotton. Work in this field can be effectively implemented through demonstrational meetings, conducting grading schools, dissemination of illustrative material on grade standards, and by individual contact with producers. In order to conduct this type of program effectively, it is desirable to work with county agents and other extension personnel. For example, results obtained in a southeastern State indicate that the grain quality program has speeded up the harvest period, reduced the moisture content at harvest, reduced the damage content, and resulted in higher test weight and better color.

2. The encouragement of the buying and selling of grain, seed, cotton, and tobacco on a grade basis is an important goal of a quality program. When these products are marketed on an incentive-for-quality basis, farmers are enabled to obtain prices commensurate with the value of the product sold and the buyer can buy with confidence that quality will be as represented. The assistance provided by specialists in many southeastern States on understanding grade and discount factors for grain, tobacco, cotton, and seed has made it possible for producers and processors to avoid unnecessary discounts. For example, soybeans in the southeastern States are plagued with purple fungus. Where such beans are graded "purple mottle," the beans can be officially graded no higher than grade 3, and also such beans are subject to a considerable discount. A clear understanding of the degree of purple stain that can be present before beans will be graded "purple mottle" will enable dealers to load cars in a manner to avoid needless discounts. Tobacco marketing offers another area for service work of this type. On many tobacco auctions, persons who understand grade factors are able to buy tobacco offered for sale, rework and properly grade the tobacco, then sell at a profit. If producers have a better understanding of the grade factors, they will be able to put up their product in a manner that would result in benefits now going to a third party. State departments of agriculture can continue to render a valuable service to producers in terms of increased net returns by showing the producer how to prepare his product for market properly.

3. A continued effort is required to assure the maintenance of quality through the marketing channels, as low quality is a serious problem resulting in lower prices and the loss of market outlets. There should be close cooperation with existing agencies to insure use of proper varieties and production practices to insure a quality product. For example, experience shows that a certain variety of soybeans is more susceptible to damage than others. In one State, garlic content of the wheat was greatly reduced, and the eradication of nematodes in three county areas was accomplished.

4. Installation of adequate facilities and equipment and control to maintain quality of product after leaving the farm should be encouraged.

5. There is a need to revise grade standards in order to have grades that will more accurately reflect the market value of the product.

6. For new programs, bench marks should be established so that progress can be evaluated after the program is started. In the existing program bench marks should be established from existing statistical data so that valid estimates can be made.

7. There should be continued expansion of service work in assistance to processors of meal, flour, etc., for human consumption. This program should be coordinated with the grain and sanitation programs conducted by State departments of agriculture and other agencies.

8. Producers and dealers should be informed with respect to their rights under existing regulations. For example, when the grade designation at the terminal market is lower than the shipping-point grade, the farmer and the dealer should know they have the right to appeal the grade.

9. Personnel working in this field must be competent and have a working knowledge of quality and grade standards as well as an understanding of the practical aspects of grain marketing.

10. Where the need exists, service programs should be conducted to assist producers, through group demonstrations and individual visits to farms, on the best method of storing, curing, stripping, and preparing tobacco for market. In addition, marketing specialists can provide advisory assistance in the market on such problems as the repacking of tobacco when it is desirable to do this to obtain the full market value of the product. This type of service program is a practical approach in assisting producers to obtain the best possible prices for tobacco.

11. The general opinion of the work group was that voluntary grading programs with incentive rewards are preferable to the adoption of compulsory grading programs.

12. Many States should be encouraged to investigate the possibility of developing a quality program for seeds at the processor level, to stimulate the marketing of locally produced seed on a quality basis. This type of program has been successfully conducted in two southern States with the following results:

a. These States are becoming important seed-producing areas.

b. The percentage of diversified seed production in these States has increased.

c. Increased quantities of quality seed produced in these States are being sold in out-of-State markets.

d. Producers and seed processors have received increased net returns resulting from more efficient seed processing and from marketing higher quality seed products.

e. The seed quality programs in these States have been instrumental in changing the methods of sale of processed seed to a net-weight basis rather than a gross basis. This method of sales has resulted in increased returns to producers for the sale of quality seed products. It appears desirable for many States to develop service programs to assist seed producers and handlers in complying with recently enacted State seed laws and to meet the market demand for seeds of high quality.

The following recommendations were made with respect to a quality improvement program for cotton:

1. Adopt pre-marketing processing (ginning) to individual bale requirements in order to preserve the maximum value of each bale.
2. Provide ginners, cotton merchants, and mills with information to enable them to identify the following factors: Grade, staple length, fiber fineness, tensile strength, and maturity.
3. Provide more detailed information for producers, ginners, and initial marketing interests on mill requirements for locally produced cotton.

HOW TO WORK WITH MARKETING FIRMS

Work Group Sessions

HOW WE ARE WORKING WITH FIRMS ENGAGED IN THE ASSEMBLY OF AGRICULTURAL PRODUCTS

Howard P. Brosset
Louisiana Department of Agriculture and Markets

Since a great deal of our time has been spent trying to solve some of the problems of shipping Louisiana strawberries, I think it is necessary to give you a brief description of the Louisiana strawberry-producing area.

The section of Louisiana which we refer to as the strawberry section is a comparatively small section in land area, actually consisting of three parishes (counties) which adjoin each other. However, there are approximately 3,500 to 4,000 strawberry producers. This area is served by only one main line railroad. This railroad runs north and south through the area and has six strawberry loading points, beginning with the southernmost town in the area.

Problems that faced the strawberry assembly people, some of which are still not completely solved, are as follows: A general lack of interest and cooperation by the railroad and express agency in the marketing and distribution of the crop; slow service by the railroad to New York and other eastern markets; reluctance of the railroad and express agency to furnish the shippers with information concerning the number of cars available for the next day's loadings, and locations of cars after their departure from the district; reluctance of the express agency to furnish shippers with modern express refrigerators; late harvest by the farmers, causing late loadings; improper handling and loading by assemblymen and truckers; and slow precooling of express refrigerator cars after loading.

The above mentioned problems directly affected marketing of the entire crop. Lack of interest on the part of the railroad and express agency in speeding up the service to eastern markets usually causes a drop in prices; also, late delivery by the producers and improper handling by the assembly people cause deterioration in the fruit. Slow precooling service also contributes to late departures in many instances. When we were called upon to assist with these problems, we immediately called and held meetings with the assembly people and producers. At these meetings, we discussed the problems, and what to do about them. A deadline was set for delivery of the fruit by the producers to the assemblymen. The assembly people were urged to try to load the fruit into refrigerated cars or trucks as soon as possible, instead of letting it set in the sun for several hours . They, in turn, were to encourage their loaders to keep refrigerator-car and truck doors closed when they were not actually in the process of loading. Precooling firms were advised to improve their equipment, to use the right amounts of salt during precooling, etc.

We also requested and received assistance from the USDA. A representative of the Freight Rate Service Branch made a study of the situation and assisted us in setting up meetings at which the railroads and express agency, producers, shippers, and other interested groups were present. At these meetings, the problems were discussed and many agreements were reached. The end result has been a better understanding of mutual problems. The railroad and express agency have definitely shown an improved attitude. Modern refrigerator cars are now the rule instead of the exception; a shipper can now call the local express agency's office and get information on the cars that he has shipped; and service to New York and other eastern markets has been speeded up.

We also requested and received assistance from another branch of the USDA. The Biological Sciences Branch started a study on precooling and refrigeration of Louisiana strawberries this past season. We assisted in this project and expect that it will be resumed during the next shipping season.

The State department and Louisiana State University are working jointly with the strawberry shippers in testing new types of containers. This project was started last season and will be continued during the coming season.

The State department has also worked with the sweetpotato shippers of Louisiana and container manufacturers on the shipment of sweetpotatoes in fiberboard containers. We have checked these containers on several Texas markets and in the Chicago and Kansas City markets. The containers are checked for durability, and the overall arrival condition of the potatoes is compared to overall arrival condition of potatoes shipped in the standard wirebound containers. In most cases, we have found that there is less skinning and bruises in the fiberboard carton, and the trade seems to prefer them to the wirebound crate.

HOW STATE DEPARTMENT OF AGRICULTURE PEOPLE CAN WORK WITH TRANSPORTATION AGENCIES

J. C. Winter
Transportation and Facilities Branch
Agricultural Marketing Service, USDA

Agricultural people have always had transportation problems, but, looking back to the time when the railroads had a virtual monopoly of transportation and reviewing what is taking place since that time, it seems to me that the problems have multiplied. Of course, most of this is due to the fact that the railroads now have strong and active competitors for the movement of products of the farm and farm supplies.

Over half of the fresh fruits and vegetables, 80 percent of the livestock and dairy products, and practically all of the poultry and poultry products now move all the way to the consumer by motor vehicle. There has been a resurgence of the use of transportation on inland waterways, particularly for the movement of heavy bulk commodities such as grain and fertilizer materials, and some increase in coastwise steamship movements through the development of roll-on, roll-off ships which carry motortruck trailers, so avoiding the high costs of stevedoring at port cities.

But the most important influence in the changing pattern of transportation has been the motortruck. This is not only because of the speed with which products can be carried to market, but also because of the many ways motortrucks can be tied in with the day-to-day operations of shippers and receivers to permit many incidental savings of great importance, besides those concerned with the actual transportation of the goods. The fact that unmanufactured products of agriculture moving by motor vehicle are not subject to the regulation of the Interstate Commerce Commission is, of course, a primary reason for the extreme flexibility that has brought about the tremendous increase in the movement of these commodities by motortruck, along with a definite expansion of their markets.

Having provided a brief background for the problems we are really concerned with here, let's get to the meat of this discussion, which is, "how can State department of agriculture people work with the transportation agencies to get our products moved to market in better condition and at least possible cost?" At the outset, let me say that I make no pretense of knowing all of the things that can be done in this direction. I can only spotlight a few of the areas which seem to me to hold the most promise of accomplishment. Starting with those, I am sure that additional avenues of assistance to the farmers of your States may be found. So I will undertake to enumerate some of the problems and reasons why I believe they are important, and will make a few suggestions that might be workable.

1. Containers

Let us start with the product when it leaves the farmer, or his packing plant, which may be his own or that of a cooperative. At present, all but a very few commodities need to be packed in some kind of container. The cost-price squeeze has made it necessary for the shipper to look to any means by which he can cut his marketing costs, and the container is one place where he has been finding it possible to do this. New and cheaper container materials and techniques of manufacture are responsible for revolutionary developments in the container field over the past few years. And some of the new containers are very good, indeed, and not only are cheaper, but also get the product to market with less mechanical damage and deterioration. Lettuce, for example, used to move almost entirely from packing sheds in ice-packed wooden crates. Now it is shipped almost entirely in fiber boxes, packed by cheaper labor in the field, and arrives at the market in better condition. A great deal of research and experimentation with new containers is going on now. This year we have done work on the development and evaluation of new containers for 17 commodities.

But research of this kind doesn't pay off until the farmer and shipper can be shown how the new developments growing out of this research can save them money, or get their products to market in better condition, so they will command a higher price.

So there is definitely a place for service work in the introduction of new developments in containers to the farmer and shipper.

2. Loading Methods

But these new containers usually are not suited to the same patterns of loading in railroad cars and trucks which served for the old containers. So we have to develop methods of loading and stacking these new containers that will give maximum protection against container breakage and bruising or other injury to the commodity while it is en route to market. And again, shippers need instruction in the methods developed.

3. Equipment

Now we have containers and loading methods. But what about the kind of transportation equipment that will be used to transport the product? This is a most important consideration, especially with highly perishable products. How much insulation, and what kind and quantity of refrigeration should be furnished? Does the motortruck or truck-trailer have floor racks and wall strips to permit adequate circulation of the air around the load? Many factors enter into proper decisions here. The length of time involved in the movement to market, the basic climate and prevailing temperatures at the time the commodity is being loaded, and especially the characteristics of the commodity being transported, are among the most important. Over many years of research by the Department on means of providing the proper environment for perishable commodities moving in refrigerator cars and refrigerated trucks, we have developed a good deal of information regarding the best use of refrigerator cars and motortruck transportation that shippers should take advantage of. I believe one of our most useful products has been a small handbook, called "Protecting Perishable Foods During Transportation by Motortruck." This booklet contains a good deal of general information about refrigeration, sanitation, percooling, and preparation and loading of the vehicle, and provides specific recommendations for desired levels of temperature and humidity, with suggested methods of loading of individual kinds of fresh and frozen fruits, vegetables, meats, and dairy and poultry products.

Primarily, this booklet was designed to educate motortruck operators and drivers about how to carry these commodities safely to market, but it should also prove to be a useful tool to service people in assisting shippers to understand what kind of equipment and service they should expect from for-hire truckers in connection with their shipments.

4. Financial Responsibility of Motor Carriers

One of the things about which the shipper must be concerned when dealing with motor carriers is the question of financial responsibility of the carrier or his broker in the event a breakdown should cause loss of all or part of the shipment. I am a consultant on the motortruck committee of the International Apple Association, which has been concerned with problems of this sort and which has prepared a model bill of lading for use on all kinds of perishable shipments. It has also developed a list of recommended precautions that the shipper may take to protect himself against loss. So materials of this kind are available, but they need to be carried to the shippers, and the need for care and the things they should expect and require of truckers who haul their products should be made clear to them.

5. Improvements in Service

An additional area where assistance is often needed is in helping shippers to obtain prompt and dependable freight service in the movement of their products. The experience of Howard Brosset, who preceded me on this program, in helping to obtain better express service for the movement of strawberries to markets is an excellent example of useful work that can be done, and I shall not elaborate the point further.

Another facet of service concerns car supply. While there have been no major nationwide car shortages in the past several years, there have been local difficulties in obtaining cars of proper quality in sufficient numbers to meet loading requirements.

6. Distribution of motortrucks

Along the same general line, consideration might well be given to the possible need for aid to shippers to assure an adequate supply of motortrucks when and where they are needed. I offer this with some question in my mind regarding the need of a program of this kind in many, or perhaps in any, States. But situations have been reported to us where, in certain areas, difficulty has been experienced in establishing connections between truckers arriving in the area seeking a load, and shippers who had products to be transported. In a few States, where there is a sufficient number of brokers, this should not be a problem. However, in other States, such a situation might well be costly to both shippers and truck operators, and a clearing house for truck information that could be operated in conjunction with the market news service, for example, might be a real service.

7. Truck Size and Weight Limitations and Taxes

State laws and regulations governing size and weight limitations for motortrucks still lack the uniformity that is desirable, although the most serious deviations have been removed within the past few years.

On the other hand, the tax system becomes more and more complex. With some exceptions, it is not the amounts of taxes they have to pay that seem to concern the truck operators so much, but the number and difficulty of maintaining the records they have to keep to satisfy the requirements of the individual States and, in some instances, the counties and cities through which they operate. I know from the reports of the transportation committee of the National Association of Marketing Officials that you people are aware of the importance of this problem and the necessity of doing something about getting some simplification and uniformity into these tax requirements.

8. Freight Rates

Many State department of agriculture people have been greatly concerned about the repeated increases in freight rates we have had during the past 10 years or so. A few weeks ago, the National Association of State Departments of Agriculture adopted a resolution calling upon the State departments to take an active interest in freight rate matters. Certainly these departments, with their close association with farmers and processors of farm products, would be in a particularly favorable position to obtain certain types of evidence that would be most pertinent and useful in freight rate cases--evidence that the rate specialists of the public utilities commissions would find it difficult to develop. Such evidence could be very valuable as a supplement to the activities of the State utilities commissions and the Freight Rate Service Branch of the U. S. Department of Agriculture. For example, in a recent freight rate case concerning rates on grain in the South, the departments of agriculture of the Southern States joined to produce some extremely valuable evidence on the extent and character of movements of grain and grain products by motortruck and railroad. I know this is a subject which you will want to explore in the discussion period to follow, so I will not dwell upon it here.

Right now there is more interest in transportation, and especially in questions of transport policy, than there has been in the past 20 years. Restrictions of the agricultural exemption, limitations on the rate-making power of the Interstate Commerce Commission, the transportation tax, and a number of other important changes will be before the Congress for consideration when it meets in January. The agricultural community needs informed strength and the ability to present its views intelligently and forcefully on these issues. Activities of this kind would, of course, have no place in a service program as such, but I am tossing this comment out to you because I cannot refrain from emphasizing my feeling that whatever the State departments can do, they should do promptly--determine, first, what their position on these questions as representatives of agriculture in their States should be, and, second, make that position known.

One of the questions that is going to concern us before this meeting is over is: What kind of people would the State departments of agriculture need to work on service programs in the field of transportation? In my opinion, most of the problems touched upon in my comments up to this point really do not require the services of experts in the transportation field, although certainly some direct training or experience in the transportation field would be desirable, and a sound knowledge of and familiarity with the transportation facilities of the State and their uses in the transportation of farm products is necessary. Upon occasion, expert advice and assistance may be required, but they may be obtained as needed in particular situations, perhaps from your public utility commissions or possibly from the Freight Rate Service people of the Agricultural Marketing Service.

But when it comes to questions of freight rates or transport legislation, the services of a transportation expert are essential. However, we must consider whether there would be enough need--that is, enough cases in which the individual State department would be involved--to justify the full-time employment of such a person, assuming that a competent man could be found. It might be possible to work out an arrangement with the State public utility commission for joint participation in important cases--the utility commission to supply the needed rate assistance, and the department of agriculture to obtain and submit at the hearing the economic type of evidence regarding local production and marketing conditions which its people would be particularly qualified to develop. Just how this problem might be met is, I think, a matter we might discuss during our sessions.

One final thought about service programs in transportation. There undoubtedly are problems in some of your States that I have not mentioned, or may not be aware of. And certainly, all of the things I have mentioned would not be appropriate for all of the States. Each State must consider the problems most important to its farmers, whatever they may be, and build its service program accordingly. The function of those of us employed in marketing research is to find ways to transport products to market in better condition and at less cost. You take it from there.

CONCLUSIONS AND RECOMMENDATIONS

Work group on how to work with assembly and transportation firms

The program of work on transportation problems most frequently mentioned by States was one wherein they had developed a system of reporting vegetables and fruits available for sale from inspectors, county agents, and vocational agriculture teachers, and through mailed questionnaires to producers. This information was assembled and then disseminated to truckers and buyers through truck stops, truck associations, and any other information outlet which would feed information to more truckers or buyers concerned with the purchase and or hauling of fruits and vegetables that were to be marketed. On arrival in production areas, such truckers and buyers were directed to individual producers by a central information source. Some suggested precautionary measures in such a program were: (1) Do not rely on a single source of information in a county, (2) make a continuing check on the accuracy of local reports on supplies available for sale, (3) use a local transportation committee to direct the flow of truckers to farms. The group pointed to the need for an exchange of buyer and trucker lists between States.

Some States suggested clinics or short courses for assembly market and transportation agencies. Such clinic programs and program assignments must be carefully worded and fully understood if the States are to avoid use of such meetings as a sounding board for a group's special interests.

States working on improvements in loading practices for rail and truck shipments must do education work with both receivers and producers. Such loading programs must go hand in hand with work on the use of the proper container. This is necessary in order to get full advantage of the loading improvements.

State department of agriculture personnel working in the transportation field need not necessarily be rate specialists. Help on rate problems can be obtained from State public utility commissions. Personnel needs are often more related to the economic analysis of transportation problems.

A transportation expert on the department staff can help in a number of ways, and these include:

1. Seeing to it that freight cars and trucks are available when and where needed for seasonal peak needs.

2. Working on rate legislation and schedules.

3. Working on the condition of freight at loading and unloading points.

There is a need for coordination of transportation work between States over entire regions. State departments should keep their neighboring States informed on their progress and problems with interestate transportation firms.

Whenever possible, department representatives should work with groups or associations rather than individuals. Where there are existing groups, it may be necessary to develop special committees within such groups who will advise on and handle the department's relations with the entire group. Such committees provide invaluable counsel on how to work with members of their groups as well as the foundation for a greater degree of confidence on the part of individual members.

State departments recommend close working relations with members of the trade when developing legislation as well as rules and regulations governing the operation of any transportation or assembly market group. Such consultations may help to determine the practical limits for establishing rules which will improve the efficiency and effectiveness of the particular group, whether such be livestock auctions, or egg assembly or milk plants. The use of advisory groups from particular industries is also helpful in administering such programs as those in which the commissioner must rule on certificates of necessity for the establishment of new livestock auctions.

The departments of agriculture may help to improve market practices by working on improvements with a single firm in an intensified manner. Such firms may serve as a demonstration for other firms of what can be done to improve the market structure.

In some States, the departments of agriculture worked through the producers as well as processors in order to secure improvements in the marketing group that operated between the two.

Some departments solicited the cooperation of equipment firms in getting application of more modern and efficient materials handling from farm to market. An example of this was the use of portable corn shellers to permit bulk handling. Some States have also worked with manufacturers in the development of minimum standards for milk tanks. The major objective of such work with equipment firms was to cut handling costs and expand market outlets for farm products.

Grading schools have been used as a means of reaching smaller assembly market operators, particularly in the egg marketing field. The State department has also helped groups interested in grading, merchandising, and advertising.

HOW TO WORK WITH PROCESSORS IN IMPROVING THEIR OPERATIONS

Ralph B. Kelly
North Carolina Department of Agriculture

I am very pleased to have the opportunity of discussing this subject with you today. It is a field in which I have been engaged for several years and is one in which a considerable amount of work is needed.

Before we explore the ways in which we should work with processors to improve their operations, let's define the word "processor." In simple terms, it may be defined as one who performs a series of actions or operations on a commodity or a product, the end result of which may be slightly different or completely different from the original product. This could be simply receiving, grading, and packaging eggs. It could be procuring, defeathering, eviscerating, cooking, and canning chickens. Likewise, it could be converting forest products into useful objects.

We are experiencing a fast changing economy, and the processing industry is being affected by this as much as any other segment of agriculture. We are fortunate, though, to be living in this day of progress, and we may look back a few years from now and realize that we were witnessing a complete revolution in our agricultural economy. We know, today, that consumers are demanding more and better processed agricultural products. Quality is not the only factor; eye-appeal is also important. They are not willing to accept many of the products they so willingly bought a few years ago. And, I dare say, if we could look into the future a few years, we would probably see the consumer, whether it be the housewife or the restaurant operator, demanding products processed and packaged in a way unheard-of today. This is progress, though, because industry develops as a result of consumer preferences.

No doubt the problems and existing conditions in your States are not too different from those in other States. Naturally, I am more familiar with North Carolina than I am with any other State. However, I shall attempt to keep my remarks rather general, and I hope they will fit in with the conditions and situations that might apply to your State.

As civil servants and employees of service organizations, it is our responsibility to assist processors who, in most instances, are doing a remarkable job in improving their operations for better efficiency, for better sanitation, and for better adjustment to consumer preferences. This should be done with at least one very important thought in mind, and that is...to help producers receive a fair share of the consumer's dollar.

Never in the history of our agricultural economy has so much been done to agricultural products from the time they leave our farms and ranches until they reach American consumers. All this additional processing and preparing takes money. Therefore, it is your job and my job to help streamline and systematize this process. If we keep that in mind and if we are equipped to do the job, our work will not be in vain.

In order to assist processors--and we all desire to do this--we must become well acquainted with the processors' problems. We must fully understand each operation carried on. We must understand the procurement problems. We must understand each operational and managerial problem. We should have a thorough knowledge of the desired qualities of the end product. We should know the consumers' desires. And, probably the most important thing, we should know the manager or the operator and the people with whom we deal. We would gather from this, then, that we must have a thorough knowledge of the industry; we must be willing to work; and we must understand human behavior and actions.

If we should narrow our thinking a little, and if we should consider food processing more in particular, I think we would agree that even though we have some extremely large operators in this field, a large part of the food processing, especially processing and distributing of fresh agricultural products, is done by reasonably small operators or is done by large processors in reasonably small processing units, normally located in the area of production. I think we could further assume that the large processing plants keep or have in their organizations specialists, such as you and I, that spend all their time improving their operation. This does not mean we have no place or should assume we could not be of help to large processors--oftentimes we can. It may be that the procedure would be somewhat different than working with smaller processors, but certainly your services and my services are available.

Normally speaking, small processors do not have trained personnel that can help them increase their efficiency; therefore, we can probably be of more benefit to this group, or certainly we can be of more benefit more often to this group, than we can to larger processors. In any event, it is extremely important that we have the confidence of the operator before we can be of help to him. In other words, we must prove to him, whether he be a large or small operator, that we are familiar with the industry. We must recognize and give the operator credit for his thinking. We must not create the impression that we are attempting to dictate to him what he should do or how he should do it. We should always leave with him the understanding that our services are at his disposal to use as he sees fit. Quite often, we can get an operator's confidence by simply letting the suggestion come from him.

There are numerous ways that we can help processors in improving their operations. For example, we can study methods and processing techniques being carried on. We can train personnel to perform specific operations. We can adjust machinery and establish operational procedures that will result in improving their overall operation.

Another way we can help processors is to assist them with their engineering problems;for example, by furnishing floor plans for remodeling, enlarging, or constructing new processing facilities. These floor plans should show the location of equipment, drains, water outlets, restrooms, office space, and refrigeration facilities, and other detailed information such as type of walls, construction, and disposal of waste and offal. Incidentally, this field of service is wide open in poultry processing, because of the recently enacted Poultry Products Inspection Act by the U. S. Congress.

We should never forget we are witnessing a fast changing economy. We should cooperate with industry and other governmental agencies in helping processors with their problems so as to help our producers receive a fair return for their products.

TECHNIQUES TO BE USED IN SECURING COOPERATION OF WHOLESALERS IN MARKETING SERVICE PROGRAMS

Spencer G. Duncan
New York Department of Agriculture and Markets

When I received the invitation to appear on this program and observed the suggested topic, I hesitated somewhat before deciding to say yes. The reason for my hesitation was a merchandising article that I had just read, which went something like this:

> "The food industry is so large, so complex, so highly organized, so diverse, and involves so many people that it is difficult to imagine how any appreciable degree of automation will be evident within the next 10 years.
>
> "Electronic item selectors for shoppers, univac order writers, robot shelf stockers, hydraulic display builders, automatic carryout services, electronic checkout tabulators -- none of these things will revolutionize our industry in so short a time, and perhaps they never will, for food retailing has already reached an efficiency level that is the envy of other kinds of retailers the world over.
>
> "Wholesalers who have concentrated on integrating themselves with their retailer customers have made phenomenal gains since 1948. U. S. retail food sales increased 62 percent since the 1948 census. In that same period, retailer-owned cooperatives increased their volume 223 percent and voluntary group wholesalers 96 percent.
>
> "In all the history of food distribution, I don't believe there has ever been a performance to match this progress made by distributors who have allied themselves with their retail customers, their problems and their opportunities.
>
> "By 1967, we can expect to see co-ops and voluntaries doing 80 percent of total wholesale food volume, while the retailers buying from them will be doing around 90 percent of independent sales.
>
> "What about frozen food sales at retail? Well, they're up from $1.4 billion in 1954 to $1.9 billion in 1956 -- an increase of 35 percent in only 2 years. They account for 4.6 percent of retail sales and may reach 15 to 20 percent in the next decade. Frozen food case display in the average retail store has increased 50 percent in the last 3 years and the end isn't in sight.
>
> "Of over 5,000 grocery and frozen food items carried, 79.9 percent sell less than 1 case per week. The average sales per item in the average supermarket are about 10 units per week.

> "Compare today's new store with last year's and you'll find the produce department has a smaller share of the selling area and that grocery, frozen foods, and nonfoods departments occupy more space, reflecting the rapid growth of new lines. As a result, customers give less attention to fresh produce than to other departments in today's supermarkets.
>
> "Why is produce losing out in today's battle for selling space? I think it boils down to a simple matter of competition. Today there are more manufacturers of more lines of merchandise, with more brands and size of their product competing harder than ever before for initial stocking, for proper re-ordering, for additional facings, for favorable shelf position, for advertising, for special display, and for other kinds of recognition.
>
> "On the whole, the produce industry has had no direct line of communications to retailers in this battle for vital representation. In other words, the industry hasn't had an effective means of asking for the fair share of additional space or promotional emphasis which is so vitally needed for produce in the average supermarket today.
>
> "Prepackaging is especially interesting to retailers today. They view the produce department as the last frontier to complete self merchandising and they want to learn facts about pros and cons of prepackaging.
>
> "Retailers want to know what's in produce packaging for them. They want to know what the future is for packaged produce. Answers to their questions should be provided by the Industry or by marketing people even before the questions are asked, for behind these answers lies an unprecedented opportunity for increased sales of fresh fruits and vegetables."

It is no wonder that I hesitated after thinking of the challenge presented in the previous quotation. The problem is great and the answers must be forthcoming in the very, very near future. We have recognized for a long time that the percentage of food distributing plants is becoming less and less each day and we must gear our food producing industry to channel through these reduced outlets. As a step toward obtaining more adequate information from wholesalers, Commissioner Carey called a meeting of representatives of the industry at Syracuse late in August to learn more about distribution techniques and to get some first-hand information that might benefit our producers. I believe the wholesalers actually let their hair down at this meeting and told us some of the things that were really troubling them.

The commissioner asked this question: "How about New York State meat?" The answers from the meat packers were something of a surprise to all of us. New York State farmers are feeding too well. They are putting too much weight on their hogs, which is something pork packers just do not want. They want bacon-type hogs. It is someone's job to let our farmers know about this. Why should they be wasting feed and virtually throwing their money down the lard barrel--for that is where the excess weight goes. We have recognized for a long time that New York is not primarily important in the production of beef cattle. However, we are increasing our herds and doing a fairly good job of marketing, according to the packers. They look at us, though, as a cull dairy-cow State rather than a beef-producing State. They suggested to us that we make an effort to do something about the grade of the "hamburg cow." We need to give this more attention. Perhaps some of the other States represented here have similar problems.

Getting back to fruits and vegetables, we were told in no uncertain terms that we must get on the ball if we are going to receive our share of the wholesaler's dollar. We have been much too slow in adopting some of the modern packaging techniques such as vacuum cooling, using modern types of packages, and then making a sincere effort to get the merchandise through the channels of trade in the best possible condition. Over the years, we have noticed a trend in this direction but not until this last season did some of our lettuce growers select, grade, inspect, vacuum cool, and properly package their iceberg-type lettuce. The deal has been an eye opener to many other phases of the fruit and vegetable industry and we are looking for some great improvements in the near future. A lot of leg work needs to be done. Who is to do it?

We are still hand packing thousands upon thousands of packages of apples in eastern-type crates in New York State every year. We are in direct competition with apples that are machine-sized and graded under more favorable conditions. How long can we continue to pack in this manner and meet the competition? With apples and other fruit, the situation is similar to that in the lettuce deal that I just mentioned. We need to do a lot of work to see if we cannot develop some sort of grading equipment that will handle our McIntosh, Cortlands, Northern Spies, and some of the other more tender and easily bruised varieties. I understand that a project is getting under way now which might be of some help to us. We hope the help doesn't come too late. George Chick tells me that we are to receive some help very soon.

Packaging is again a problem. Just what does our modern supermarket want in the way of apple and other fruit packages? We need to know. We have inspected thousands of stores and found many displaying apples and other fruit in such poor condition that it never should have been offered to the consuming public. How can we get this fruit to consumers in better shape? This is also something we need to know.

Our wholesalers form a very important link in the merchandising chain. Whether we like to believe it or not, they have a great influence on the direction in which a retailer moves. In other words, in my opinion, in a great many instances, they "call the shots." If they recommend potatoes from Podunk because they are cooking well this year or because they are an exceptionally good buy, usually that is what the retailer takes. They also render many other marketing services. At a meeting which I attended a few days ago, retailers were complaining because so many of the items purchased from the wholesalers were reaching them in a shopworn condition. It was their feeling that, in many instances, fruits and vegetables were being held too long under not too favorable conditions in the wholesale houses, and the practice was resulting in a very rapid breakdown when they were placed on the racks in retail stores. A few items mentioned were brussels sprouts, broccoli, cauliflower, lettuce, peppers, and eggplants. From our experience with wholesalers around the State, we are more or less familiar with their facilities and recognize that there are but a very few who have adequate refrigerating rooms in which to hold items after they are unloaded from the refrigerated car or truck. It seems to me that there is a job to be done in this area also. One group has asked us to make inspection every Monday morning. I believe, too, that there is a vast market for homegrown fruits and vegetables which is as yet undeveloped in cities adjacent to the growing areas. It is not unusual to see truckloads of out-of-State merchandise coming into our produce houses while at the same time local producers are finding it difficult to find a home for much of their produce. Perhaps the answer is a form of centralized packing to insure a greater volume of carefully graded products, uniform in type, and marketed in prime condition.

We anticipate that we will be called upon in the very near future to assist our New York State poultrymen in getting their houses in order for the coming Federal inspection program. Already we have seen a keen interest on the part of some of our larger producers. While we have the situation pretty well under control on Long Island with the duck merchandising people, there is a great deal of work to be done in upstate New York among our larger producers of turkeys and chickens. It is our understanding that some States have already embarked upon a program which is designed to give assistance to poultry producers, and even furnish specifications that would assist producers in complying with the Federal statutes. We would like to hear more about this program.

We feel that we have two or three rather unique programs in operation in New York State. One is with a fairly good-sized chain of local super markets all located within 125 miles of Syracuse. The program with this chain started about 5 years ago when they asked us to periodically check their eggs, which were purchased direct from the producer and packaged by him. We do not stop with just checking the quality of the eggs. We look over the refrigerated cases, check the eggs in the storeroom, ascertain whether or not they are being properly rotated, and, if we should find trouble that needs immediate correction, we are authorized to go direct to the producer and straighten him out. Of course, a copy of the report goes direct to the company's headquarters. This program worked so well that we were asked to make periodic checks of the ground beef for which a specification had been worked out. Samples are fried to determine the loss of fat and moisture in an electric frying pan. The entire formula for determining the quality of the meat was worked out by the department and the chain in cooperation with the New York State College of Agriculture. In addition to checking the actual meat for fry-out, etc., taste, odor, and cleanliness also are taken into consideration and the entire meat department is carefully checked for sanitation. This program,too, is working very well. Only recently we have been asked to check the fruit and vegetable counters, with special emphasis on grading, freshness, and display technique. Each inspector is given the authority to eliminate any produce that he feels is no longer acceptable to the consumer, and the produce department is given full credit on all items removed by the inspector. The chain is finding this service most valuable, and indicates that it has increased produce sales quite materially.

Another project which we are just undertaking is in connection with eggs purchased by a large cooperative. During the past few years, their whole system of distribution has changed to such an extent that they now require periodic checks of the candlers and the cartoned eggs to determine the quality both before and after distribution. Another function expected of the department is to give assistance in training candlers and to see that uniformity is maintained.

Since arriving at this workshop, I have noted considerable interest in another project we are carrying on in New York State in cooperation with the USDA, which we feel will eventually be a distinct help to our wholesalers in the field of egg marketing.

Several months ago, we inaugurated a program to secure country-point egg prices and to pass these prices on to the trade. We have fairly good distribution of our market reporters in New York State, with offices at Buffalo, Rochester, Syracuse, Utica, Albany, Newburgh, New York City and Riverhead, on Long Island.

Our reporters at these points obtain their prices from country-point buyers by telephone, and, by means of a Statewide teletype hookup, report to Albany, where the report is compiled and then passed on for distribution from our New York City office. This report is carried by the Associated Press and United Press, and distributed to many radio and television stations.

We have had some headaches, but by and large the program has proceeded about as expected, and we feel it is doing a much needed service.

We are also just getting started on a f.o.b. onion price-reporting project. This is set up so that there is a report from each area, and there are four distinct areas in New York State which have their individual characteristics. These reports cover prices paid to growers in these areas, and we feel that they may serve a very useful purpose and aid our wholesalers to purchase on a more intelligent basis.

As all of you probably know, we can probably be considered as novices in the field of farm products promotion, but we are getting a program under way and we feel that the information and suggestions we have received from distributors have been of great value, not only to our department but also to the shippers who are cooperating with us in this new program. We will probably have much more to say about this at future workshops when we get farther out in the stream of promotion and standardization of farm products.

There are other services that I could mention, but, in brief, this about covers the important projects we are carrying on in New York State.

CONCLUSIONS AND RECOMMENDATIONS

Work group on how to work with marketing firms (processors and wholesalers)

The experiences in attempting to furnish assistance to industry by State service personnel indicate that some of the more pressing problems confronting processors and wholesalers include these:

New processing techniques required by new trends in commodity preparation; major facility alterations, new equipment and handling methods required by new laws and regulations; a trend to centralized packaging; adequate market price information; and training of graders and key personnel.

Services provided in one State included analysis of production and marketing problems by a trained marketing specialist teamed with an engineer to analyze processing plant facility and equipment requirements necessary to meet minimum Federal standards. This was accomplished successfully by close cooperation with U. S. Department of Agriculture personnel at all times, and a smooth working relationship with plant management. Other States, not as elaborately staffed with technical personnel, have augmented their service by using the limited assistance made available through the U. S. Department of Agriculture and equipment manufacturer personnel.

It was generally felt that State personnel with a wide range of experience in industrial processing techniques and a thorough knowledge of regulation requirements should be used to provide such service a thorough manner. It was considered preferable to concentrate available service in relatively few establishments in select areas where the industry is concentrated. When a thorough service is provided in such plants, the application of efficient facility planning and plant layout could serve as a model for other members of industry and could be used as a guide for those with similar problems.

Concern was expressed by some that the relatively low salary level of their field personnel would make the development of an adequate staff for such service prohibitive.

Recommendations for consideration:

1. Develop a recruitment and training program that would provide qualified State personnel for this type of State service.

2. Augment limited USDA assistance presently available to States in this type of service work.

3. Provide State personnel performing this type of service work and industry with nontechnical explanations of Federal and State regulations requiring major plant alterations.

CONCLUSIONS AND RECOMMENDATIONS

Work group on how to work with marketing firms (retailers)

Dr. Raymond W. Hoecker of AMS, USDA, gave the formal presentation of an effective program for working with retailers, using the produce department of retail stores as an example.

The group developed the following recommendations as a first point of this type of marketing service.

In new or remodeled retail stores, the group felt, a most important aspect of expanding outlets for agricultural products would be to assist (1) in utilizing shelf space for improved marketing, (2) in general store layout, to emphasize efficiency and cut marketing costs, (3) in personnel training for display and preparation for sale of commodities,packing, trimming, weighing, and pricing, (4) in developing improved relationship between wholesaler and retailer, with efficient operation as an ultimate goal, (5) in eventually improving performance in all departments by personnel training.

A program of such a nature would be extremely desirable to improve marketing of agricultural products by a better control over quality and a more efficient operation, leading to an expanded use of such commodities by such methods.

Dr. Hoecker gave examples of the type of work that has been accomplished on an experimental basis with two chain retail grocery companies. Very little has been done on this subject by the several States, and improvement in retailing appears to present a challenging problem to marketing specialists.

Industry has repeatedly requested further assistance since an experimental or pilot study was made. Reports from that pilot study show the reduction of marketing costs in retail preparation, display, and sales was as much as 15 percent, reflecting on the downward pricing of the various products involved and an expansion of the volume of sales of these agricultural products. In all instances, an efficient system has cut the retail marketing costs and reduced retail prices, to the point that the competiveness of the product has greatly improved the demand and thereby expanded the outlets.

In the event that enough States desire to place specialists in this field on their staffs, a special 3-day workshop on this subject might be arranged for training State employees.

PUBLICITY WORKSHOP REPORT

Representatives from 13 States and 1 Territory attended all or a part of the special workshop on publicity.

General opinion of the publicity workshop was that publicity or public information services are of vital importance to any marketing or promotion program. Therefore, the publicity workshop recommends that similar sessions be held at future AMS workshops and that publicity or information specialists of participating departments be urged to attend.

Realizing the importance of newspapers in getting the story of department activity or product promotion before the public, we feel it is essential that department personnel in charge of public information work strive constantly to know media personnel on a personal basis to the advantage of the departments and projects.

Radio definitely has a place in spreading information of agricultural products as well as the services of various departments of agriculture. Tying in programs with rural stations is particularly desirable in view of the trend of metropolitan stations toward music and news exclusively. Possibility is present in many areas for development of rural radio networks through telephone or FM facilities.

TV offers wonderful opportunities for promoting AMS matched-fund programs through consumer and producer information services. The publicity workshop urges those attending the 1957 workshop to explore the use of TV facilities in their local areas, mindful of the fact that qualified personnel are required to produce good TV programs.

CONCLUDING REMARKS

L. G. Foster
Liaison Office, Matching Fund Program
State Departments of Agriculture
Agricultural Marketing Service, USDA

I should like to conclude this tenth Marketing Service Workshop by expressing our appreciation to all who have contributed to its success. The attendance of 20 heads of departments or their deputies indicates an increasing interest in the development of better marketing service programs. This is indeed encouraging to AMS, as it indicates more attention will be given to the solution of marketing problems in the States. It is also encouraging to have in attendance 154 representatives from 40 States and Territories and Washington, D. C.

We greatly appreciate the assistance of Matt Jennings, chief of the Tennessee Division of Markets, and his staff, the Memphis Chamber of Commerce, and the hotel management for their considerate and helpful suggestions in trying to see that our meeting ran smoothly. Our advisory committee has been very helpful in developing the workshop program. We especially appreciate the work of the program committee--George Chick, Clifton B. Cox, Marvin Faller, and John A. Winfield--who cooperated with the Liaison Office staff in developing the program. A great deal of credit for the success of the workshop is due to the excellence of the challenging and informative talks given by the speakers at the general sessions and at the work group meetings. We appreciate the time and effort they spent in presenting the marketing problems that were to be discussed by the work groups.

We wish to acknowledge the fine leadership of the chairmen and secretaries of the various groups for the splendid job they did in directing the discussions and for the preparation of the reports of the work group meetings. All in attendance are to be commended for their faithful attendance in the work group meetings and their participation in the work group discussions.

This workshop could be said to be as good or better than any previous meeting that has been held. Yet, when we check the programs of the States who are represented at this workshop, it is impossible to select a single State that can be said to have an adequate marketing service program that meets the needs of the State.

What worthwhile results will come out of this 3-day session rests entirely in your hands. We hope and expect to see better marketing service work carried on in all of the States.

PERSONS ATTENDING THE WORKSHOP

Ackerman, Eugene A.	Ga. Dept. of Agriculture	Thomasville, Ga.
Alampi, Phillip	N. J. Dept. of Agriculture	Trenton, N. J.
Allen, Byron G.	Minn. Dept. of Agriculture	St. Paul, Minn.
Anderson, W. W.	Md. State Board of Agriculture	College Park, Md.
Bain, Patterson	Mo. Dept. of Agriculture	Jefferson City, Mo.
Bair, William I.	N. Y. Dept. of Agriculture and Markets	Albany, N. Y.
Ballentine, L. Y.	N. C. Dept. of Agriculture	Raleigh, N. C.
Barron, Wade	Ark. Livestock Sanitary Board	Little Rock, Ark.
Beridon, O. P.	La. Dept. of Agriculture and Immigration	Baton Rouge, La.
Bishop, J. A.	Tenn. Dept. of Agriculture	Nashville, Tenn.
Boggs, C. E.	Ga. Dept. of Agriculture	Atlanta, Ga.
Boswell, Robert L.	Ga. Dept. of Agriculture	Atlanta, Ga.
Bray, C. Harold	Ky. Dept. of Agriculture	Frankfort, Ky.
Bridges, Leroy W.	Okla. Dept. of Agriculture	Oklahoma City, Okla.
Brosset, Howard P.	La. Dept. of Agriculture and Immigration	Baton Rouge, La.
Brown, Leo P.	Minn. Dept. of Agriculture	St. Paul, Minn.
Brown, Mary M.	AMS, U. S. Dept. of Agriculture	Washington, D. C.
Brown, Royce W.	Maine Dept. of Agriculture	Augusta, Maine
Bruett, Charles	S. Dak. Dept. of Agriculture	Pierre, S. Dak.
Butler, Ben. J.	Ky. Dept. of Agriculture	Frankfort, Ky.
Callaway, R. P.	AMS, U. S. Dept. of Agriculture	Washington, D.C.
Campbell, Charles E.	W. Va. Dept. of Agriculture	Charleston, W. Va.
Campbell, E. S.	Tenn. Dept. of Agriculture	Morristown, Tenn.
Charron, William P.	Maine Dept. of Agriculture	Augusta, Maine
Chick, George H.	Maine Dept. of Agriculture	Augusta, Maine
Clark, Harold O.	Vt. Dept. of Agriculture	Barre, Vt.
Claiborne, Henry A.	Tenn. Dept. of Agriculture	Nashville, Tenn.
Clevinger, Woodrow W.	Wash. Dept. of Agriculture	Seattle, Wash.
Collins, E. C.	AMS, U. S. Dept. of Agriculture	Washington, D. C.
Corley, Si	Miss. Dept. of Agriculture and Commerce	Jackson, Miss.
Cox, Clifton B.	Purdue University	Lafayette, Ind.
Crothers, John L.	Md. State Board of Agriculture	College Park, Md.
Crow, William C.	AMS, U. S. Dept. of Agriculture	Washington, D. C.
Cyrus, J. H.	N. C. Dept. of Agriculture	Raleigh, N. C.
Dahl, Math	N. Dak. Dept. of Agriculture	Bismarck, N. Dak.
Daniel, David R.	La. Dept. of Agriculture and Immigration	Baton Rouge, La.
DeCuir, Walter J.	La. Dept. of Agriculture and Immigration	Baton Rouge, La.
Doak, Justin H.	Mo. Dept. of Agriculture	Jefferson City, Mo.

Downing, B. F.	Tenn. Dept. of Agriculture	Nashville, Tenn.
Duncan, Spencer G.	N. Y. Dept. of Agriculture and Markets	Albany, N. Y.
DuPre, Mason J.,Jr.	ARS, U. S. Dept. of Agriculture	New Orleans, La.
Dyer, Boyce	Ga. Dept. of Agriculture	Atlanta, Ga.
Ellington, E. Buford	Tenn. Dept. of Agriculture	Nashville, Tenn.
Engendorff, O. H.	Wyo. Dept. of Agriculture	Cheyenne, Wyo.
Ewald, Gale E.	Wis. Dept. of Agriculture	Madison, Wis.
Faison, O. W.	N. C. Dept. of Agriculture	Raleigh, N. C.
Faller, Marvin A.	La. Dept. of Agriculture and Immigration	Baton Rouge, La.
Farris, W. K., Jr.	Ala. Dept. of Agriculture and Industries	Montgomery, Ala.
Fenton, Floyd	AMS, U. S. Dept. of Agriculture	Washington, D. C.
Fontenot, Louis, Jr.	La. Dept. of Agriculture and Immigration	Opelousas, La.
Ford, Frank B.	Miss. Dept. of Agriculture	Jackson, Miss
Foreman, Davis	Ill. Dept. of Agriculture	Springfield, Ill.
Foster, L. G.	AMS, U. S. Dept. of Agriculture	Washington, D. C.
Frazier, R. F.	National Broiler Council	Richmond, Va.
Freeman, G. Chester	AMS, U. S. Dept. of Agriculture	Washington, D. C.
Freer, Charles A.	N. Y. Dept. of Agriculture and Markets	Albany, N. Y.
Germany, Ralph	La. State Dept. of Agriculture and Immigration	Baton Rouge, La.
Gilbert, Samuel J.	Iowa Dept. of Agriculture	Des Moines, Iowa
Gilchrist, John P.	Ga. Dept. of Agriculture	Atlanta, Ga.
Goldsborough, George H.	AMS, U. S. Dept. of Agriculture	Washington, D. C.
Hager, Robert D.	Ky. Dept. of Agriculture	Frankfort, Ky.
Hall, Jesse P.	Ga. Dept. of Agriculture	Atlanta, Ga.
Hamann, John	AMS, U. S. Dept. of Agriculture	Washington, D. C.
Handy, Russell P.	W. Va. Dept. of Agriculture	Charleston, W. Va.
Hanson, Rew V.	N. Dak. Dept. of Agriculture and Labor	Bismarck, N. Dak.
Harris, James R.	Ill. Dept. of Agriculture	Springfield, Ill.
Hartzell, Jack F.	Mich. Dept. of Agriculture	Lansing, Mich.
Hay, James R.	Ohio Dept. of Agriculture	Columbus, Ohio
Healy, Norman	AMS, U. S. Dept. of Agriculture	Washington, D. C.
Henderson, Boyd M.	Ala. Dept. of Agriculture and Industries	Montgomery, Ala.
Henderson, Roy M.	N. Dak. Dept. of Agriculture and Labor	Bismarck, N. Dak.
Hindman, Ruel R.	Ill. Dept. of Agriculture	Springfield, Ill.
Hockaday, James F.	N. C. Dept. of Agriculture	Raleigh, N. C.
Hoecker, Raymond W.	AMS, U. S. Dept. of Agriculture	Washington, D. C.
Hoffman, A. C.	Kraft Foods Company	Chicago, Ill.

Holkesvik, Roger H.	N. Dak. Dept. of Agriculture and Labor	Bismarck, N. Dak.
Holland, Louis	Md. State Board of Agriculture	Salisbury, Md.
Hutcheson, Robert F.	Va. Dept. of Agriculture and Immigration	Richmond, Va.
James, W. L., Jr.	Va. Dept. of Agriculture and Immigration	Harrisonburg, Va.
Jennings, Matt	Tenn. Dept. of Agriculture	Nashville, Tenn.
Johnson, Fred P.	N. C. Dept. of Agriculture	Raleigh, N. C.
Johnson, J. T.	W. Va. Dept. of Agriculture	Charleston, W. Va.
Johnson, L. W.	Miss. Dept. of Agriculture	Jackson, Miss.
Johnson, Roy B.	La. Dept. of Agriculture and Immigration	Baton Rouge, La.
Kelly, R. A.	University of Illinois	Urbana, Ill.
Kelly, Ralph B.	N. C. Dept. of Agriculture	Raleigh, N. C.
Kemper, George D.	W. Va. Dept. of Agriculture	Charleston, W. Va.
Kiker, York (Miss)	N. C. Dept. of Agriculture	Raleigh, N. C.
Kuhrt, William J.	Calif. Dept. of Agriculture	Sacramento, Calif.
Lee, E. R.	Ark. State Plant Board	Little Rock, Ark.
Legg, Carol D.	Farm Journal	Philadelphia, Pa.
Luckett, Charles D.	Miss. Dept. of Agriculture and Commerce	Jackson, Miss.
McMaster, Thomas A.	Mont. Dept. of Agriculture	Helena, Mont.
McMillan, A. L.	Miss. Dept. of Agriculture and Commerce	Tylertown, Miss.
Mackey, H. E.	Va. Dept. of Agriculture and Immigration	Suffolk, Va.
Maclay, W. Dayton	ARS, U. S. Dept. of Agriculture	Peoria, Ill.
Mahoney, John E.	Md. State Board of Agriculture	College Park, Md.
Martin, Hugh B.	N. C. Dept. of Agriculture	Raleigh, N. C.
Mason, Walter S.	N. Y. Dept. of Agriculture and Markets	Albany, N. Y.
Matheson, John L.	N. Y. Dept. of Agriculture and Markets	Albany, N. Y.
May, W. H.	Ill. Dept. of Agriculture	Springfield, Ill.
Mejia, Jorge	Puerto Rico Dept. of Agriculture and Commerce	San Juan, P. R.
Millar, Paul H.	Ark. State Plant Board	Little Rock, Ark.
Moffett, A. G.	Va. Dept. of Agriculture and Immigration	Richmond, Va.
Morell, Bartolome	Puerto Rico Dept. of Agriculture and Commerce	Santurce, P. R.
Morris, William F.	Tenn. Dept. of Agriculture	Nashville, Tenn.
Moser, Charles O.	Colo. Dept. of Agriculture	Denver, Colo.
Murphy, William J.	N. Dak. Dept. of Agriculture and Labor	Bismarck, N. Dak.

Neck, Malcolm M.	La. Dept. of Agriculture and Immigration	Marksville, La.
Norman, Hudson	Ga. Dept. of Agriculture	Thomasville, Ga.
Norris, Walter G.	Ky. Dept. of Agriculture	Frankfort, Ky.
Park, R. J.	Tenn. Dept. of Agriculture	Nashville, Tenn.
Pearson, M. H.	Ala. Dept. of Agriculture and Industries	Montgomery, Ala.
Petr, Winzer J.	Kans. State Board of Agriculture	Topeka, Kans.
Poffenberger, Dewey	W. Va. Dept. of Agriculture	Charleston, W. Va.
Post, Robert E.	AMS, U. S. Dept. of Agriculture	Washington, D. C.
Rainey, John L.	Pa. Dept. of Agriculture	Harrisburg, Pa.
Risher, F. W.	Fla. Dept. of Agriculture	Jacksonville, Fla.
Robert, S. A.,Jr.	American Dairy Association	Chicago, Ill.
Roberts, Richard H.	FAS, U. S. Dept. of Agriculture	Washington, D. C.
Rooke, Derek S.	WMCT	Memphis, Tenn.
Rowley, Brace	Kan. State Board of Agriculture	Topeka, Kan.
Sandy, J. R.	Ga. Dept. of Agriculture	Atlanta, Ga.
Schifsky, Richard G.	Minn. Dept. of Agriculture	St. Paul, Minn.
Scott, Leon S.	Miss. Dept. of Agriculture and Commerce	Jackson, Miss.
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Simon, Paul	Ky. Dept. of Agriculture	Frankfort, Ky.
Smith, Leo W.	AMS, U. S. Dept. of Agriculture	Memphis, Tenn.
Spencer, George Q.	Utah Dept. of Agriculture	Salt Lake City, Utah
Stanard, Stillman J.	Ill. Dept. of Agriculture	Springfield, Ill.
Stiles, John	W. Va. Dept. of Agriculture	Charleston, W. Va.
Stringfield, Ray M.	La. Dept. of Agriculture and Immigration	Hammond, La.
Stubbert, R. W.	Maine Dept. of Agriculture	Augusta, Maine
Swanson, G. A.	Mich. Dept. of Agriculture	Lansing, Mich.
Sweezey, F. R.	N. Y. Dept. of Agriculture and Markets	Syracuse, N. Y.
Thomason, T. E.	Minn. Dept. of Agriculture	St. Paul, Minn.
Thrall, Charles M.	N. Y. Dept. of Agriculture and Markets	Riverhead, N. Y.
Trelogan, Harry C.	AMS, U. S. Dept. of Agriculture	Washington, D. C.
Tutt, Joel H.	Ga. Dept. of Agriculture	Atlanta, Ga.
Van Patten, Loyd	Iowa Dept. of Agriculture	Des Moines, Iowa
Verdoorn, C. E.	Minn. Dept. of Agriculture	St. Paul, Minn.
Wagner, William A.	Ga. Dept. of Agriculture	Athens, Ga.
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Warrington, S. T.	AMS, U. S. Dept. of Agriculture	Washington, D. C.
Wells, Joe E.	Mich. Dept. of Agriculture	Lansing, Mich.

Wermuth, E. L.	N. Y. Dept. of Agriculture and Markets	Albany, N. Y.
Whigham, C. B.	N. Mex. Dept. of Agriculture	State College, N. Mex.
Williams, G. M.	Fla. Dept. of Agriculture	Jacksonville, Fla.
Williams, Robert T.	Texas Dept. of Agriculture	Austin, Tex.
Wilson, James W.	Alaska Dept. of Agriculture	Palmer, Alaska
Wilson, R. B.	Purdue University	Lafayette, Ind.
Wilson, T. E.	Ga. Dept. of Agriculture	Atlanta, Ga.
Winfield, John A.	N. C. Dept. of Agriculture	Raleigh, N. C.
Winter, J. C.	AMS, U. S. Dept. of Agriculture	Washington, D. C.
Zahn, Ernest	N. Dak. Dept. of Agriculture and Labor	Granville, N. Dak.

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